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**MANAGEMENT OF DISPERSED CAMPING
ALONG THE NEBO SCENIC LOOP**

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TITLE: Management of Dispersed Camping Along the Nebo Scenic Loop

ABSTRACT:

This project develops a strategy for implementation of management for dispersed camping opportunities along the Nebo Scenic Loop. The strategy is based on the direction of the Land and Resource Management Plan for this area of the Uinta National Forest and the profile of the dispersed camper. The paper looks at the conflicts between the dispersed campers and the other recreational uses of this area, and makes recommendations to facilitate management of dispersed camping opportunities while providing customer satisfaction.

Keywords: Dispersed Camping, Undeveloped recreation.

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Summary:

For purposes of this paper dispersed camping will refer to camping or picnicking outside of developed facilities.

The Nebo Scenic Loop is a intensively developed scenic drive. The demand for dispersed camping opportunities has resulted in resource deterioration in areas along the road. In addition to the loss of vegetation and soil, scenic quality is also impacted by dispersed camping vehicles continuously occupying these areas. During the development of the the Land and Resource Management Plan for the Uinta National Forest the need for dispersed camping opportunities was identified as a public concern. The direction from the Plan is to continue to offer dispersed recreation opportunities close to the urban centers of Utah, but to manage these opportunities to reduce resource damage. Past management actions to reduce resource damage has resulted in closure of areas and loss of opportunities for dispersed campers.

Review of the literature on dispersed camping points out that managers and recreationists usually have different perceptions as to what resource impacts are occurring from camping activities. Where it is important that managers strive to understand the site attributes the dispersed camper wants, the public cannot be relied on to determine or understand the resource problems that result from camping activities. To develop a better understanding of the users' perceptions of resource problems and users' expectations, a questionnaire was mailed to people that used the Nebo area during 1988.

This paper discusses the present situation and how best to implement the direction of the Forest Plan. The demand for dispersed camping opportunities along with all phases of outdoor recreation is going to continue to increase. The existing developed facilities currently are not meeting the demand during the heavy use periods of the season. Every area that is accessible by vehicle has been established as a dispersed camping site, and these areas are not meeting the present demands. Results from the questionnaire, indicate that only 34% of the people using the Nebo Scenic Loop feel the dispersed camping negatively influences their impressions of scenic quality and approximately 33% feel the camps along the road should be minimized.

Respondents from the urban areas tended to have a greater perception for resource problems that are caused by camping activities, while the majority from smaller rural communities, did not perceive any problems.

The results also show that dispersed campers will not readily accept any limitations or changes to the dispersed camping sites. From past actions that resulted in closure of dispersed sites we know that site substitution is not acceptable for lost opportunities. As the demand for the many diverse uses of the area increases, the conflicts between the uses will also increase.

To balance the variety and heavy concentration of uses, dispersed camping opportunities will need to change. Access to dispersed sites needs to be by designated routes only, and these routes hardened to reduce resource problems. Depending on the resource limitations, actual sites may have to be hardened or at least the vehicle areas. Site alterations will have to be minimal to maintain vegetative cover. To reduce visual impacts from camping activities, vegetation will need to be planted to provide screening from the paved road. The roads that provide opportunities off the Nebo Loop road need to be improved and hardened to encourage use away from the road. Camping sites along these roads will be limited to designated sites to prevent resource damage. The closure of sites along the Nebo Loop will coincide with improvements to new sites.

User education will be emphasized both on the Forest and prior to visiting. Interpretative programs will be designed to heighten visitors awareness and users will be encouraged to be involved with improvements to dispersed sites to increase understanding and acceptance of these changes.

MANAGEMENT OF DISPERSED CAMPING

ALONG THE NEBO SCENIC LOOP

Spanish Fork Ranger District
Uinta National Forest

March 1989

I. INTRODUCTION

The Mount Nebo Unit on the Spanish Fork Ranger District is comprised of approximately 119,455 acres of National Forest System Lands under Uinta National Forest administration. The Nebo Unit offers a considerable variety of quality recreational opportunities and experiences to both dispersed and developed recreationists ranging from a primitive experience within the 28,000 acre Mount Nebo Wilderness to the heavily used Payson Lakes recreation complex. The area is within a few minutes to a few hours drive of the major metropolitan areas within the State.

The Unit contains the highest peak, Mount Nebo, on the Wasatch range and attracts numerous hikers to the summit each year. Its rugged and steep terrain presents unique experiences and challenges to all who frequent the area. An excellent trail system, containing over 100 miles of maintained trails, provides opportunities for hiking, backpacking, horseback riding, trailbike riding and cross country skiing. Excellent deer and elk habitat provide some of the best hunting in the area for hunters from within and without the State of Utah.

There are approximately 35 miles of paved road, commonly referred to as the Mount Nebo Loop, that traverses through a corridor of outstanding scenery and unsurpassed beauty. Scenic driving on the Nebo Loop is the single most popular form of outdoor recreation on the Nebo Unit. Scenic overlooks enhance the driving experience by providing customers with an opportunity to observe the beauty of the scenic landscapes. The Forest Service is currently coordinating with local communities to market and promote the Nebo Unit, emphasizing the Nebo Scenic Loop, to enhance tourism and stimulate local economies. The Nebo Loop has been nominated as a State Scenic Byway.

Developed recreation is a major management concern on the Nebo Unit. Presently, there are developments in each of the main canyons. The Nebo Scenic Loops provides access to eight popular campgrounds and picnic sites including the 100-unit Payson Lakes recreation complex and the Blackhawk campground group complex. The Payson Lakes complex offers interpretative trails, overnight camping, picnicking, water sports and fishing opportunities. The Blackhawk campground, with a capacity for 1200 people, was specifically designed to accommodate large group camping and picnicking. In addition, a separate loop within the Blackhawk campground was developed and designated as a horse-users facility where loading/unloading ramps, and hitching posts are provided. An equestrian trail was developed to augment this type of use which is expected to increase. Additional campgrounds are planned for development, and others are being expanded to meet the growing demand for developed recreation on the Nebo Unit.

The Nebo Unit is also a popular choice for undeveloped recreation use. During the preparation of the Forest Plan, it was estimated that the Nebo Unit accounted for approximately twenty-eight percent of dispersed recreation on the Forest. The majority of undeveloped recreation use occurs along the Mount Nebo Scenic Loop, which conflicts with the visual resource objectives. The average dispersed camping use is 150,000 RVD's (recreation visitor days) per year.

With the limited opportunities available, dispersed recreation use results in highly concentrated, continuous use of all areas adjacent to the paved road accessible by vehicle. The majority of this use is with travel trailer, motorhome, and pickup camper. There is very little tent camping. With this amount of use on weekends, the open areas along the road have the appearance of highly concentrated trailer parks. The use has resulted in site deterioration, both physical and aesthetic, as evidenced by the loss of ground vegetation and soil. The majority of the site deterioration is caused by vehicle travel. In many of the dispersed sites, camper concentrations exceed capacities in the developed campgrounds where the sites are hardened by asphalt and cement to reduce resource impacts.

The culture in the State of Utah and the demographics of former rural areas that have recently become urbanized, results in a population that is very outdoor oriented. Many of the recreationists, especially the ones that reside in the communities directly adjacent to the National Forest, have been camping in their particular spot for many years and likely for generations. In addition, the National Forest offers relief from the hot temperatures during the summer months. For people in these communities, a few minutes drive will result in a 15 to 20 degree relief in daily temperature. When the days begin to cool in early fall the need to get away from the heat lessens, but the use increases on the National Forest with the start of the hunting seasons. Utahns are very avid hunters and the hunt provides another reason for families to camp together during the fall. The general hunting season is the highest use period for the dispersed camping areas.

Many users are very territorial about their camping spots. In the past, camping vehicles have been left all summer or dropped off early in the week to reserve their spot for the weekend. These actions have only increased the concentration of use and limited the opportunity for others to disperse camp.

II. PURPOSE AND OBJECTIVE

This paper will analyze and summarize the information gathered in the user questionnaire and review and discuss the results of past actions dealing with dispersed recreational activities. The results should assist the District Management team in broadening its perspective on the impacts of implementing Forest Plan direction, concerning dispersed recreation management, and provide a better understanding of the preferences and perceptions of the involved publics.

Objectives:

1. Determine the sample groups' opinion or preference of:
 - a. Which activities users participate in.
 - b. Are campers interested in having more developed fee areas?
 - c. Do the dispersed camps along the Nebo Scenic Loop road detract from customers' visual expectations?

- d. Why people camp in the dispersed areas?
 - e. What limitations on activities would users accept in dispersed camping sites.
2. Determine the different preferences and opinions between the demographical groups.
 3. Determine the significance of the additional comments on the questionnaire and the response needed.

III. LITERATURE REVIEW

The management of dispersed camping activities is a relatively new field for resource managers. Where there are numerous articles and publications relating to wilderness and backcountry use, there are only a limited number of publications dealing specifically with dispersed motorized camping.

Resource Impacts

The problem of resource impacts caused by dispersed campers outside of more pristine environments in wilderness areas is one that resource managers have not addressed thoroughly. Awareness of impacts from recreation use can be documented over many decades. Written evidence of managerial concern appears as early as 1913 when the transient visitor was described as a "formidable menace, posing a threat to forest from man-caused fires and introducing problems of sanitation in community watersheds". (USDA Forest Service 1913, 1915). In some areas, such as along the Wasatch front outside of Salt Lake City, the canyons have been closed for watershed protection.

Research done by Downing and Clark (1976) found that resource managers misjudge what recreationists' perceptions and expectations might be. In part, this may be due to differences in values and expectations. As compared with most users, who are from a urban area, managers have education in and understanding of the natural environment and have formed traditional views concerning activities and behaviors appropriate in the forest setting. Users may be less disturbed than managers at conditions in developed sites that are similar to their urban-environments, i.e. litter or noise in the campgrounds. Many may not even perceive the existence of environmental impacts, which result from their recreational activities, that annoy and distress managers. This concept is supported through actions by the users on the Nebo Scenic Loop. For example, many users are accustomed to advertising their garage sales by posting signs throughout the neighborhood on telephone poles, stop signs, etc. On the National Forest, they direct friends to their camp by posting signs along the loop. Hundreds of signs are posted each weekend, many covering Forest directional signs and campground entrance signs. When a Forest Officer explains the problem caused by their signs, these users are shocked to realize that the Forest Service considers such signs as littering.

In many cases, campers may not be aware of the resource impacts resulting from their recreational activities. Users do not perceive the resource impacts or at least are not deterred from using a particular site (Carlson 1985). Hendee, Hogans, and Koch (1976) found that the more heavily impacted sites continue to remain the most popular.

Most of the watershed management concerns in the Wasatch Front Canyon bottoms stem from dispersed recreation use. Other activities such as grazing, harvesting forest products, minerals and other special uses activities have a negligible impact compared to recreation activities. (Muir 1984).

Impacts from recreation activities are affecting wildlife habitat, rate of soil loss, stream sedimentation and visual quality in the canyon bottoms. The deterioration in site visual quality results from reduced ground cover, litter, numerous fire circles, tree scarring and uncontrolled vehicle cross country travel.

Studies have shown that visitor surveys are not a satisfactory method of determining unacceptable resource conditions. Visitor attitudes are affected not only by resource conditions but also by the individuals' desires and preconceived ideas about the area (USDI, BOR, 1962, Downing and Clark, 1979). The outdoor Recreation Resources Review Commission (ORRRC) has recommended that recreation policy not be based entirely on the vagaries of user preferences and perceptions, as these may not be compatible with the objectives for certain site establishments, nor can they be discretely enough identified to be used to establish policy (USDI, BOR, 1962). If these conclusions are accepted, management of impacts must be based on (1) professional recognition of long-term consequences and (2) legal and policy goals that set standards for acceptable impact levels.

Studies concerning the Canyon bottoms of the Wasatch Front that receive heavy dispersed recreation use show that the soils derived from the geologic materials common to the areas have a rate of new topsoil formation of 1 inch for every two to four hundred years. Rates of soil loss are from 0.04 to .10 inch per year. This rate of soil loss places the areas in a degrading condition. When overland flow occurs, these sites contribute sediment directly to streams in amounts greater than allowed under state law. (Federal Water Pollution Control Act of 1965, Amended 1972).

Christensen, Pacha, Varness, Lapen, (1976) in their study along the Green River in Washington, found that evidence of fecal pollution and Salmonella bacteria in the relatively clean water of the watershed suggests that potential health hazards exist from dispersed camping activities. They found that bacteria entered the surface water quickly even though rain or surface runoff was minimal.

The management direction of the Uinta National Forest Resource Plan is based on direction from the National Environmental Policy Act of 1969 Section 102., and the National Forest Management Act of 1976. Management implications indicate that irreversible soil loss must be prevented whether caused by dispersed recreation or timber harvest activities. Man-caused soil loss must not exceed rates of natural soil formation or exceed natural downslope soil movement.

Policy and Direction

The challenge for the resource manager is to provide for recreational activity while maintaining the resource. As stated by Driver and Brown (1978), the most important responsibilities wildland managers have are: (1) provide recreation opportunities which are demanded and appropriate for the area being managed; (2) prevent unacceptable damage to the resources; and (3) protect users from serious harm.

During the Uinta National Forest planning process the following issues relating to dispersed recreation were identified:

- Inappropriate use of off-road vehicles is causing resource damage and conflicting with other Forest uses.
- Dispersed recreation opportunities must not be decreased.
- Management of dispersed recreation sites is expensive in terms of personnel, equipment, and facilities and generates no dollar return.

- Water quality and quantity, soil productivity and watershed conditions are deteriorating in riparian zones due to dispersed recreation activities.

The direction for management of dispersed camping is specified in the Uinta National Forest Resource Plan as follows:

- Offer dispersed recreation opportunities in areas close to urban centers of Utah, with emphasis on a full range of trail opportunities.
- Future dispersed recreation will include sports and activities such as hang gliding and rock climbing. As long as these recreational pursuits do not endanger others, cause environmental damage, or disturb wildlife, they will continue as permitted activities.
- Where livestock grazing now exists, undeveloped camping and picnicking will continue unless specifically restricted.
- Inventory visual resource and evaluate as an integrated part of the Forest planning process, addressing the landscape's visual attractiveness (variety class) and the public's visual expectation (sensitivity level).
- Under the Visual Management System, the visual resource along the Nebo Scenic Loop has a variety class of "distinctive" due to the the variety of unusual and outstanding landforms and vegetative patterns. The sensitivity level, (peoples' concern for scenic quality), is level one which includes all visible areas from PRIMARY travel routes, use areas, and water bodies where, as a minimum, at least one-fourth of the Forest visitors have a major concern for the scenic qualities. With a variety class of distinctive and a sensitivity level of one, the visual quality objective is classed as foreground retention. This visual quality objective allows only for management activities which are not visually evident. Under retention, activities may only repeat form, line, color, and texture which are frequently found in the characteristic landscape. Changes in their qualities of size, amount, intensity, direction, pattern, etc., should not be evident. Retention does not prohibit short duration changes but retention should be accomplished either during any operations or immediately after.
- Expand interpretive service program and facilities, including contact stations, self-guided trails, and auto interpretation tours (historical and watershed), emphasizing educational and resource activities. Where practical, coordinate facilities with other Government agencies.
- Overnight camping and picnicking will be allowed on a rest-rotation basis in riparian zones. A site specific analysis process will be used to schedule the open and rest periods.
- A rest-rotation system will be developed for dispersed recreation sites to establish a management system which will reduce resource impacts.
- Open the entire Forest to camping in undeveloped areas, unless otherwise posted as closed for resource protection or public safety.
- Require groups using dispersed areas to provide their own restroom facilities.
- Give priority consideration to watershed in all management activities and facility development.

- Give priority consideration in all management activities and decisions to water quality.
- Prohibit, where posted, camping in undeveloped areas within 100 feet of lakes and streams.

Social

Possibly the most difficult challenge for the management of dispersed recreation areas is for managers to define and develop an understanding of the social values and perceptions of the user base. To address this problem managers must know the importance forest visitors place on particular features of recreational setting (called site attributes). It is essential for managers to understand the site attributes before attempting to maintain or enhance desirable qualities, or to mitigate the deterioration of these values as a result of other forest uses. (Clark, Stankey 1965)

It is generally accepted that a recreational opportunity setting consists of three components: the physical-biological setting, including those qualities provided by nature; the social setting including those qualities associated with people, such as the type and amount of use in areas; and the managerial setting including those conditions provided by management, such as rules and regulations, developmental activities, roads and recreational facilities (Clark and Stankey 1979).

In their study, Downing and Clark (1976) found that dispersed recreationists along forest roads prefer a very low level of development. While the respondents preferred a few conveniences, they were more than willing to accept the unimproved conditions in order to protect the type of opportunity they sought. Downing and Clark also found that users value their privacy, freedom, peace and quiet. Dispersed camping was preferred by 85% of users because they could camp away from others. Nearly three out of four indicated that freedom from regulations and opportunity to alter sites are important values. Dispersed recreationists return to favorite sites and have been returning for many years. Any management changes to these sites, or allowance of site deterioration by uncontrolled use, most likely will be noticed and may be disruptive to a large percentage of the users.

Efforts to close or restrict use of favored areas may even lead to rule violations by users who re-open access to these areas by removing barriers or closure signs. Research suggests that without understanding reasons for restrictive management actions, users may be able to rationalize the rule violation (Clark, Hendee and Campbell 1971; Clark 1976).

Past Management Actions

The physical and/or legal closing of areas to dispersed recreational activity has been one solution utilized in the past to correct resource problems. Where there are numerous opportunities in the same area this may still be the best option. In 1988, on the Spanish Fork Ranger District, Uinta National Forest, two areas with resource problems were dealt with as follows:

Hobble Creek Canyon

The right fork of Hobble Creek is a very narrow canyon bottom defined by a stream and a paved road for approximately five miles. There are two developed campgrounds at either end of the five mile stretch. Between these two developed campgrounds were five small picnic areas with tables and toilet

facilities. Most of these small sites, developed in the 30's or 40's, were not designed to receive heavy use and had deteriorated over the years.

These small sites, in addition to every available area along this road, were used for overnight camping. The dispersed camping use was so heavy that a user who wanted to visit the canyon for day use activities was often forced to park in the road. Such heavy use resulted in site and stream deterioration with the loss of ground vegetation and the acceleration of soil erosion (Muir 1985). After several alternatives were analyzed, it was decided to remove the deteriorated picnic facilities, expand the existing campgrounds to mitigate the loss of picnic sites, and limit this section of the canyon to day use activities only. After extensive public involvement, the majority of the recreationists, with the exception of a local group with strong possessive feelings toward this area of the canyon, have accepted this change. While many of them live within a 10-15 minute drive from this canyon, the desire for dispersed camping is very strong. There are other areas available for dispersed camping within 20-30 minutes, but such substitution for the closed sites is not readily accepted.

Salt Creek Canyon

This area is on the south end of the Nebo Scenic loop drive. A spur road from the Nebo Scenic Loop accesses two developed campgrounds, a trailhead for the wilderness area and several summer homes. This narrow canyon bottom is dominated by a stream and paved road terminating at the second campground. These two campgrounds are about one and one-half miles apart. Dispersed camping opportunities are very limited in this area due to the rugged terrain and stream. The sites are so limited that many times camping vehicles are either parked parallel to the road or part of the vehicle is directly adjacent to the pavement. Several of these dispersed sites were adjacent to the developed fee area campgrounds which sometimes caused problems with the recreationists that used the developed campground. The developed campers were concerned about paying for the use of the facilities when people camping just outside the campground paid no fees but still used the facilities.

After analyzing several alternatives, the Forest decided that the area between the two campgrounds should be limited to day use activities only. There are dispersed camping opportunities along the Nebo Scenic Loop road less than a quarter of a mile away.

Once again, site substitution was not an acceptable alternative for the individuals that customarily used these sites between the campgrounds. Managements' perception that the trailers parked along the road would disappoint customers' scenic expectations were not shared by the local recreationists. Local reaction to this situation followed the research findings of Clark, Hendee and Campbell (1971). Where the users do not understand the reasons for management changes they were able to rationalize their opposition and violation of rules.

IV. ANALYSIS OF DATA

The information and data from the questionnaire is specific to the groups that were sent the questionnaire. If the sensing is broadened to reflect other user groups the results may be different.

Questionnaire Development

The questionnaire was divided into three parts. The first part asked respondents to indicate which activities they participated in when visiting the Forest and respond to 8 questions by ranking their

opinion on an ordinal scale as follows: very strongly agree, strongly agree, agree, neutral, disagree, disagree strongly, disagree very strongly. The questionnaire asked respondents for their opinion of facilities in existing developed campgrounds, the need for additional campgrounds, etc. and if the dispersed camps along the Nebo Scenic Loop road detracted from their enjoyment of the Uinta National Forest. The second part of the questionnaire was directed to respondents who disperse camp. The same scale was used to answer 11 questions on why they disperse camp and what changes or limitations would be acceptable. The questionnaire also asked opinions on 11 questions determining the importance of certain site characteristics. Again an ordinal scale was used as follows: very important, important, somewhat important, neither important nor unimportant, somewhat unimportant, unimportant, or very unimportant.

The last set of questions dealt with those site attributes which are important in camp site selection. The results were somewhat disappointing in that some respondents indicated that all characteristics were important. More reliable indices could have been formed, if the respondents would have identified which characteristics were the most important.

Respondents' comments, concerns, or suggestions were also solicited at the end of the questionnaire. Copies of the questionnaires are in the appendix.

Questionnaire Response/Non-response

Nine hundred seventy eight questionnaires were mailed to people who used Nebo Scenic Loop area. Mailing addresses were obtained from the following groups:

TABLE I

Group	Number	Number Response	Percent Response
1 Reservations	505	227	44.8%
2 Disp Camper	34	20	58.8%
3 License Number	303	130	42.9%
4 Camper no R.	136	65	47.0%
TOTALS	978	442	45.1%

1. Reservations group—names were randomly selected from a list of reservations for the developed campgrounds along the Nebo Scenic Loop during the 1988 camping season.

2. Dispersed camper group—these are dispersed campers that made extended stays along the Nebo Loop.

3. License number group—these names were randomly selected from a list of customers that visited the Nebo Loop area during September 9-18, 1988.

4. Campers without reservations—names were randomly selected from a list of people that stayed in the campgrounds along the Nebo Scenic Loop, but did not use the reservation system.

For purposes of analysis the respondents were grouped into four geographic areas.

The areas are the Salt Lake City (SLC) area, which includes Salt Lake City and 15 other communities in the Salt Lake Valley. This area is dominated by Salt Lake City with a population of 1.3 million. The second area is Utah Valley. Utah Valley is dominated by the Provo-Orem cities and 10 other communities with a population of 250,000. The third area is South of Santaquin which is dominated by the cities of Santaquin and Nephi along with 3 other communities. Population is approximately 10,000. The fourth area includes the remainder of Utah. This area is dominated by small communities, each with a population of 2000 or less.

Four-hundred forty-two of the 978 questionnaires were returned for an average return rate of 45.1%. The response was consistent (Table I), with the exception of the dispersed camper group, where the return rate was 58.8%. This higher response rate may be attributed to a perception that the questionnaire may promote changes or as Hillard (1986) states:

"While there is no way to assess the differing views of the respondent versus the non-respondent, it is felt that those having strong feelings one way or the other would have returned the questionnaire. The responses should, therefore, give a representation of any feelings either agreeing or disagreeing."

As you can see in Table II, the response rate is very consistent among the groups. Only the area South of Santaquin responded at a rate 4% higher than the other groups.

TABLE II
Return Rates By Area

Group	Name	Number	Number Response	Percent Re- sponse
1	Salt Lake City	360	163	45.2%
2	Utah Valley	528	240	45.4%
3	S. Santaquin	59	29	49.1%
4	Outsiders	31	14	45.0%
TOTALS		978	446	45.6%

The average respondent is 40-45 years of age, visits the Nebo Scenic loop an average of 2 times a year, and stays an average of 2.7 days. Even though 81% of the respondents were people that used the developed campgrounds, 59% of all the respondents dispersed camped sometime during the year.

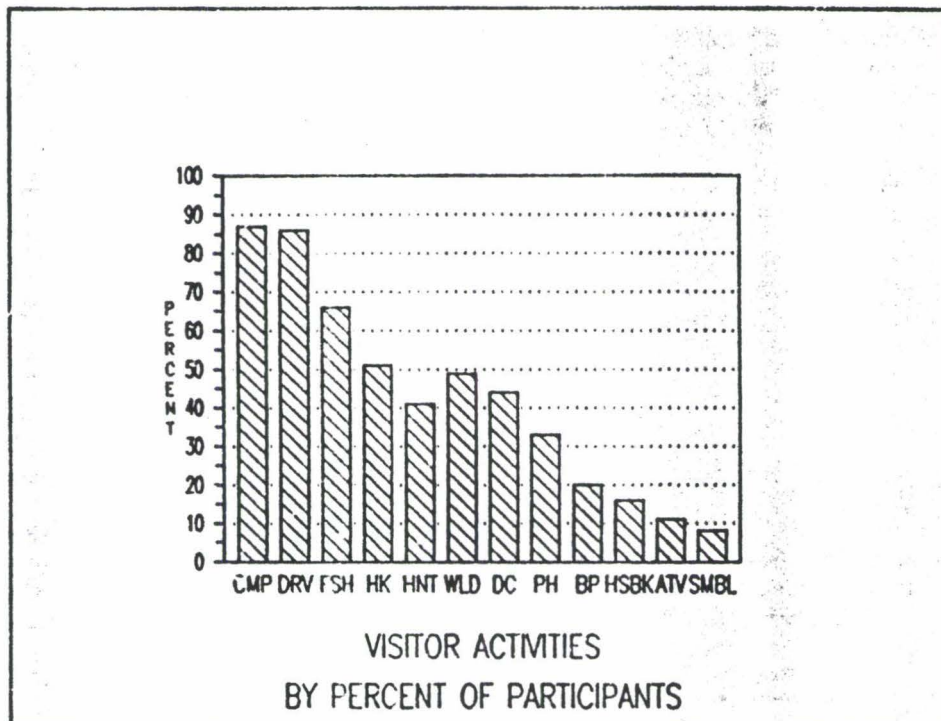
Respondents comments, concerns, or suggestions were also solicited at the end of the questionnaire. Copies of the questionnaire are in the appendix.

V. DISCUSSION

The following discussion and interpretations deal with the questionnaire data. The data were stratified by demographics in an attempt to identify the customers, and to develop a better understanding of their perceptions. Although limited, the analysis of the data does provide insight to users' preferences. The statistical analysis and data compilation is in the appendix. Most correlations between questions and groups are relatively weak and will fall in the .3 to .4 range. This range of correlations is expected when dealing with opinions of groups with diverse demographic ranges.

Visitor Activities

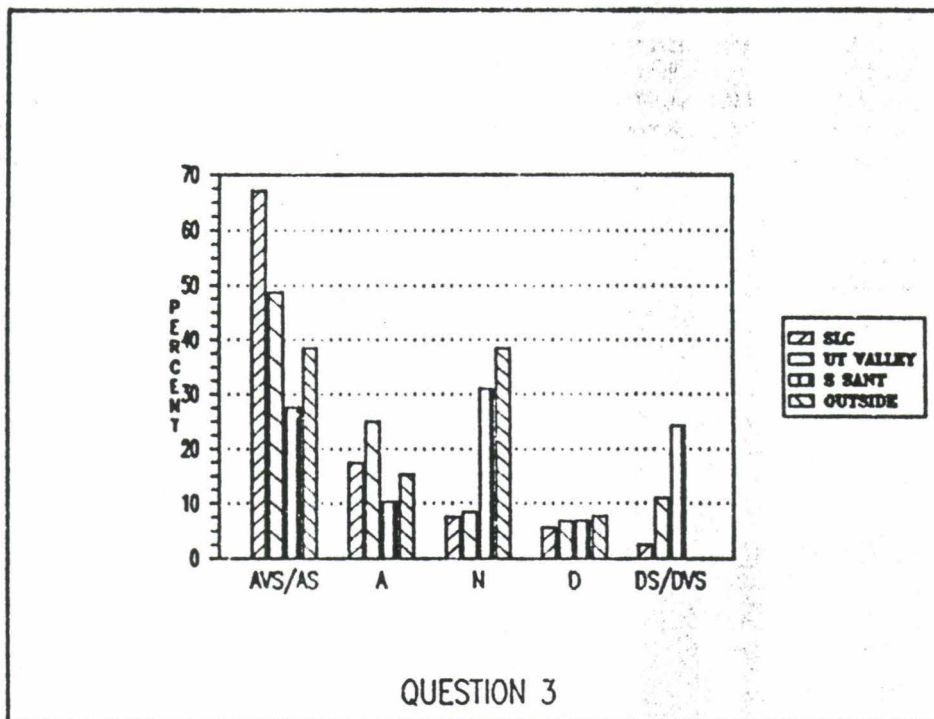
TABLE III



Question 2. When you visit the Uinta National Forest in which activities do you participate; camping in developed campgrounds (CMP), scenic driving (DRV), fishing (FSH), hiking (HK), hunting (HNT), wildlife observation (WLD), dispersed camping (DC), photography (PH), backpacking (BP), horseback riding (HSBK), all-terrainvehicle (ATV), and snowmobiling (SMBL).

Eighty-seven percent of the respondents indicated that they visited the Nebo Scenic loop for the activity of scenic driving. This follows the national trend that scenic driving is the number one outdoor activity, but with this group, camping was rated just as high. Also, it is interesting to note that more of the respondents visit the Nebo area to observe wildlife than for hunting.

TABLE IV



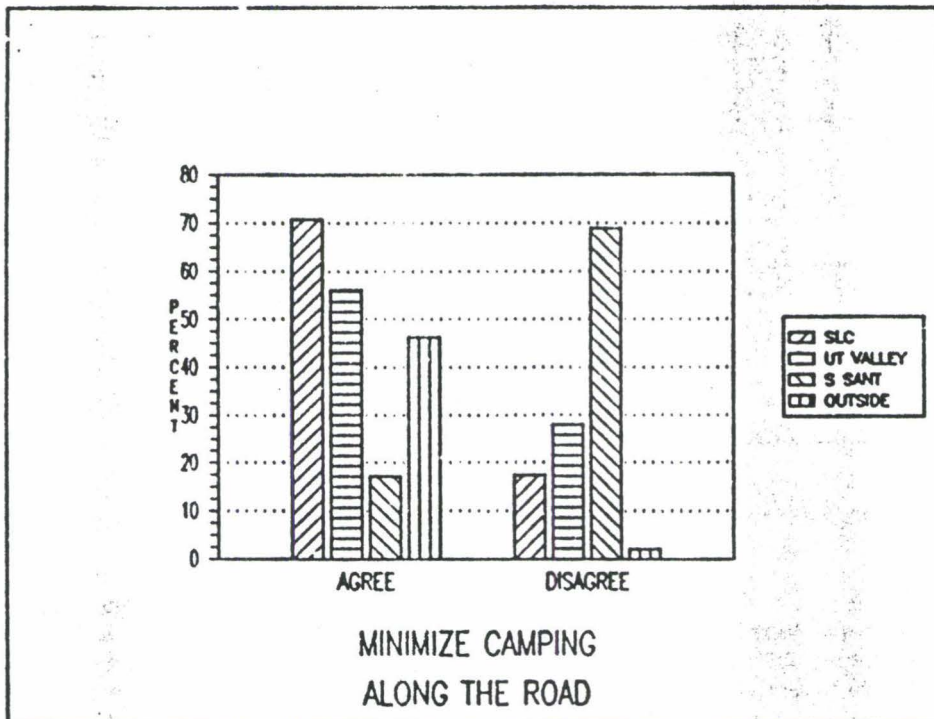
Question 3. I would like to see more developed campgrounds.

Fifty-five percent of the respondents agreed that they would like to see more developed campgrounds. This percentage drops considerably when we look at the results from the group South of Santaquin where only 38% agreed that they would like to see more developed campgrounds (Table IV). Only 39% are currently satisfied with facilities existing in the developed campgrounds on the Uinta National Forest. With the question, "I don't mind paying when I go camping", it was an even split with 34% agree, 35% neutral, and 31% disagree.

Visual Impacts

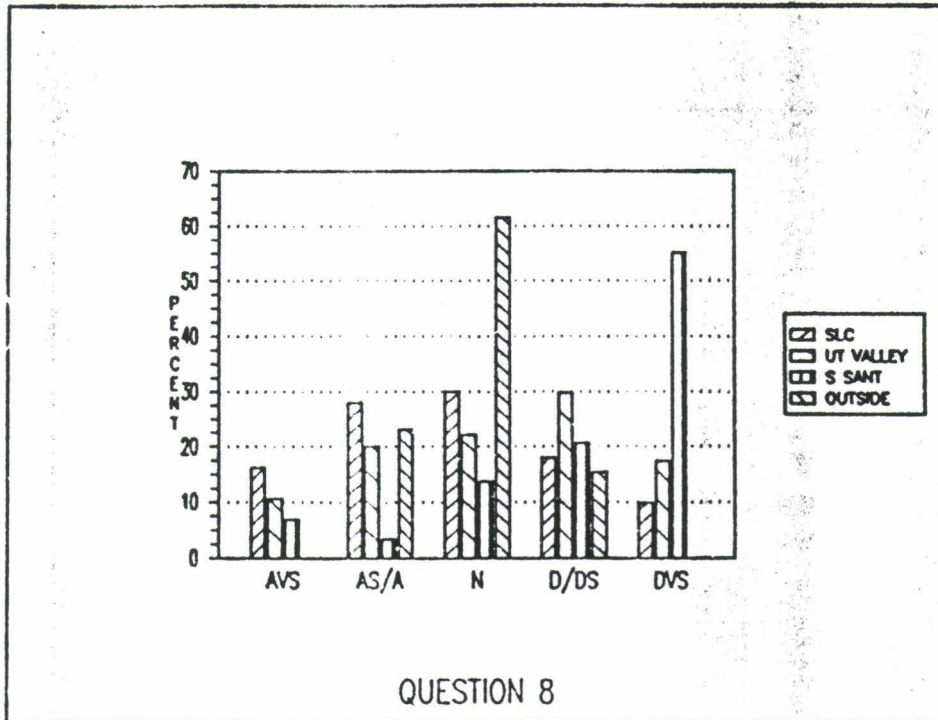
In determining if the dispersed camps along the Nebo Scenic Loop Drive detracted from the visual expectation, only a little more than a third of the respondents noticed the dispersed campers, with 36.3% agreeing to agreeing very strongly and a third (33%) were neutral. Less than a third (28.2%) did not notice the campers. Of those that disagreed to noticing campers along the road, they also tended to strongly disagree that the dispersed camps along the road negatively influenced their impressions of scenic quality.

TABLE V



When asked if the dispersed camps along the road should be kept to a minimum, 33.0% of the respondents agreed to agreed very strongly. Between the groups, there is a significant difference in the response to this question. (Table V).

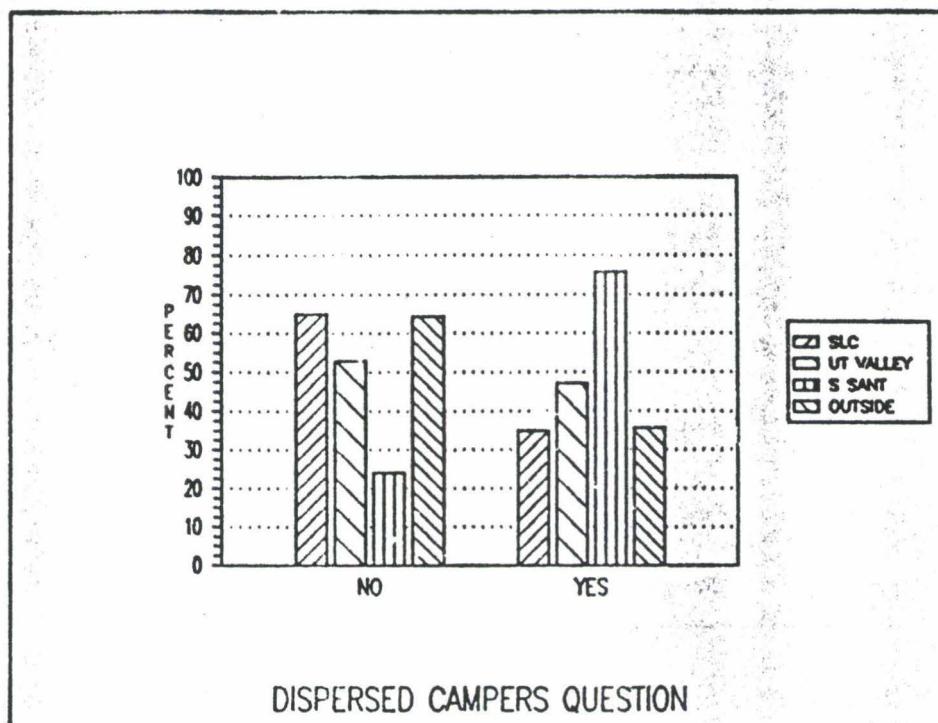
TABLE VI



Question 8. The presence of dispersed camping along the road negatively influences my Impressions of the scenic quality.

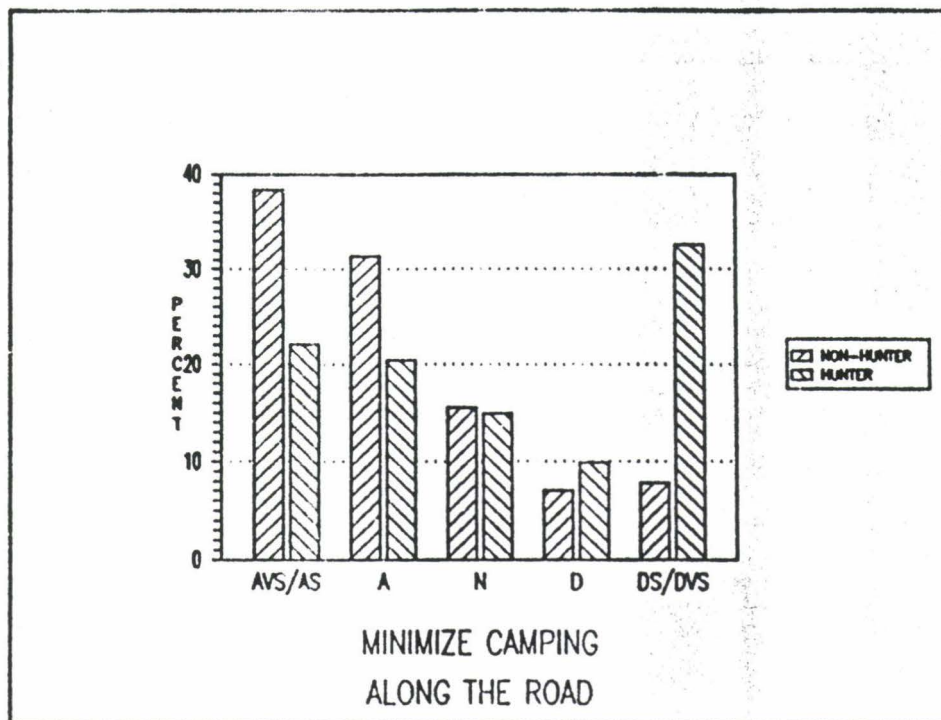
Of the total response, 34% agreed to agreed very strongly, that dispersed camping along the road negatively influenced their impressions of scenic quality. Between the groups there is a strong difference of opinion. With the South of Santaquin group, 55% disagreed very strongly, where with the Salt Lake City group, only 10% disagreed very strongly.

TABLE VII



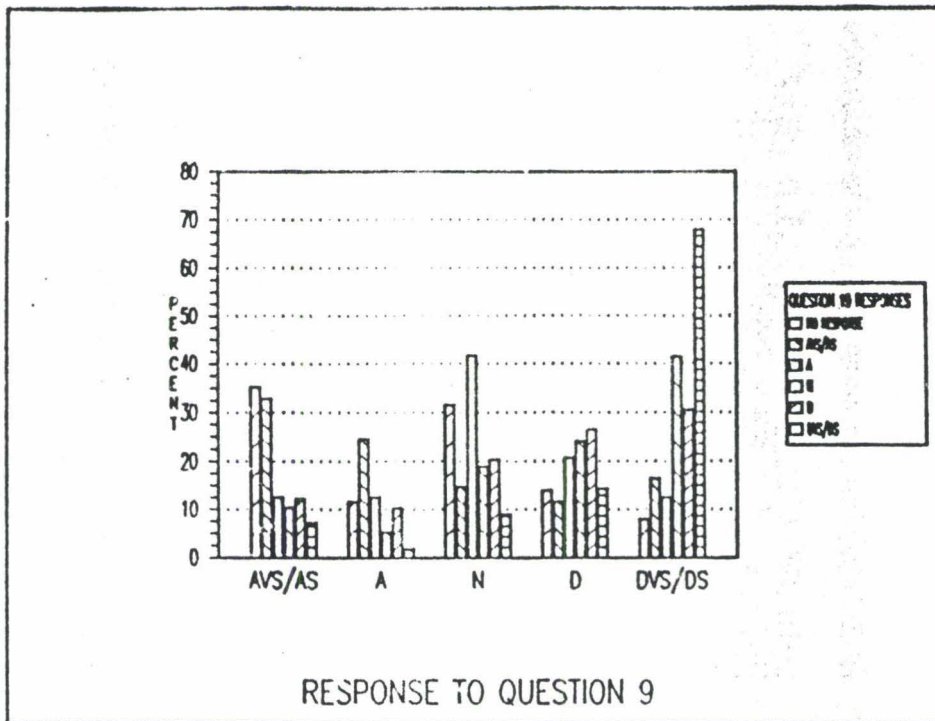
Out of the 446 responses, 264 (59%) indicated that they have camped in dispersed areas on back or dirt roads, and 45% have dispersed camped along a main or paved road. Though relatively weak, these percentages do indicate that the dispersed campers, when given a choice, would prefer to camp away from the main paved roads. Only with the South of Santaquin group is the majority (76%) dispersed campers.(Table VII)

TABLE VIII



Correlations between groups and questions were fairly weak. One exception was with Question #9, (Dispersed camping along the roads should be kept to a minimum), and with those respondents that hunt and those that do not hunt, the correlation was very strong. As displayed in the graph in Table VIII, non-hunters tended to agree more strongly that dispersed camps along the road should be kept to a minimum. The hunter-group's opinions spread evenly across the scale, except for those that strongly and very strongly disagreed, there is a substantial increase in percent. This correlation may reflect the hunter-group's need for additional dispersed sites during the hunting season. During the hunting season every available site is occupied for a two to six week period.

TABLE IX



Question 9. Dispersed camping along the roads should be kept to a minimum.
 Question 19. I camp in dispersed areas only because the developed campgrounds are full.

Question 9 was cross tabulated with question 19 (Table IX). As expected, people that do not disperse camp (no response), agreed strongly/agreed very strongly that the camps along the roads should be minimized and the respondents that disagreed very strongly with Question 9, also disagreed very strongly with Question 19. Outside of these groups, respondents were mostly neutral. These results correlated with other studies which found that recreationists do not always see the same problems and that managers perceive. One reason that recreationists may not be concerned with the camps along the roads is that they might not be aware of alternatives.

Site Attributes for Dispersed Camps and User Acceptability of Management Changes

To develop an indication as to the level of acceptance of site changes and restrictions on dispersed camping sites, questions were asked to determine if respondents would:

TABLE X

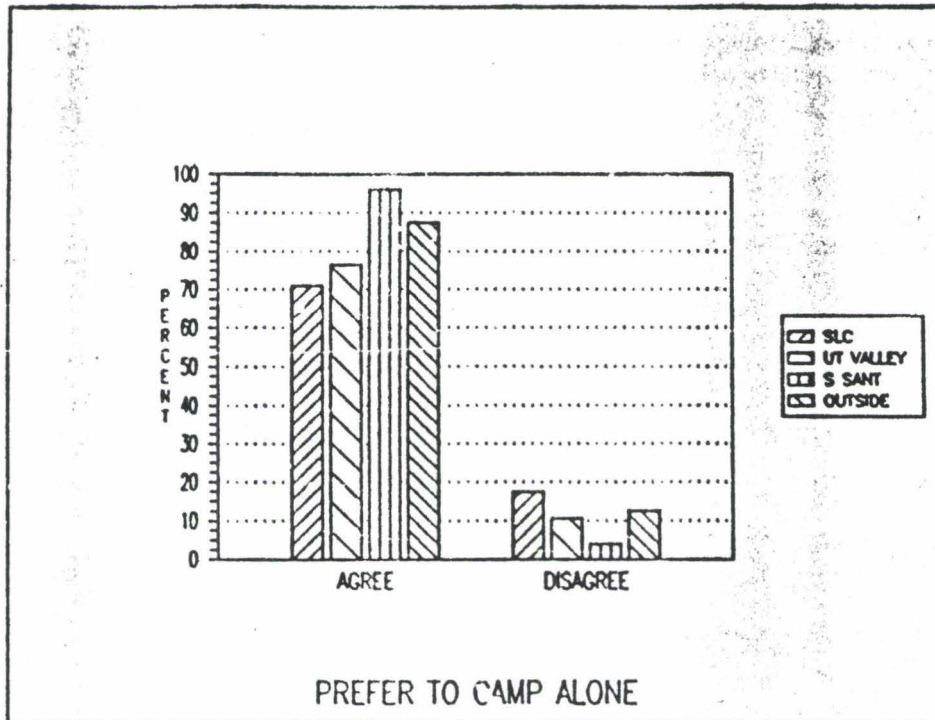
23. Continue to use sites if hardened (graveled)?
24. Prefer to camp alone—with just their camping party?
25. Prefer to camp within sight of other camps.
26. Prefer to camp within hearing distance of other campers.
27. Prefer camps not be left unattended for more than 48 hours.
28. Prefer that loud noises be prohibited between 10:00 p.m. and 6:00 a.m.
29. Prefer to camp away from the Nebo Scenic loop road.

All Respondents That Disperse Camp -Total %

No.	AVS	AS	A	N	D	DS	DVS	TA	TD
23.	8.0	22.5		34.5	14.9	5.5	9.6	30.5	30.2
24.	29.6	26.8	20.4	11.1	6.8	2.1	3.2	76.8	12.1
25.	4.3	4.3	13.3	30.5	23.3	10.4	14.0	21.9	47.7
26.	5.1	3.3	8.4	27.3	20.4	15.6	20.0	16.8	56.0
27.	36.5	17.4	22.0	11.7	3.9	2.8	5.7	75.9	12.4
28.	45.0	19.6	17.9	8.6	4.6	1.1	3.2	82.5	8.9
29.	11.8	11.5	21.5	39.1	7.5	3.9	4.7	44.8	16.1

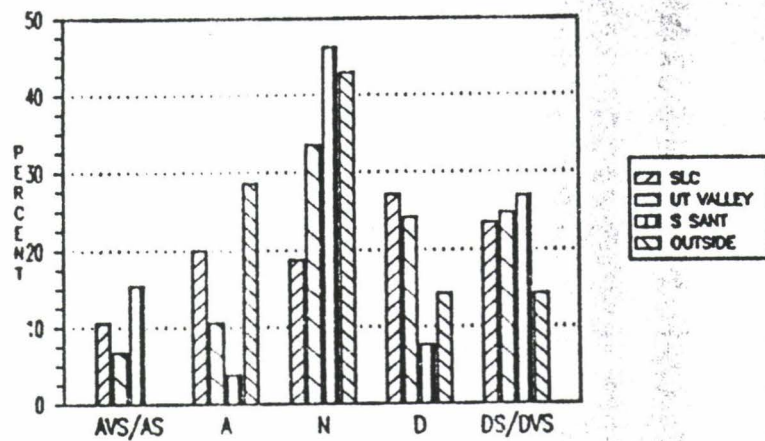
AVS (Agree very strongly), AS (agree strongly), A (agree), N (neutral), D (disagree), DS (disagree strongly), DVS (disagree very strongly), TA (total agree), TD (total disagree).

TABLE XI



Question 24. I prefer to camp in an area alone—with just my camping party.

TABLE XII



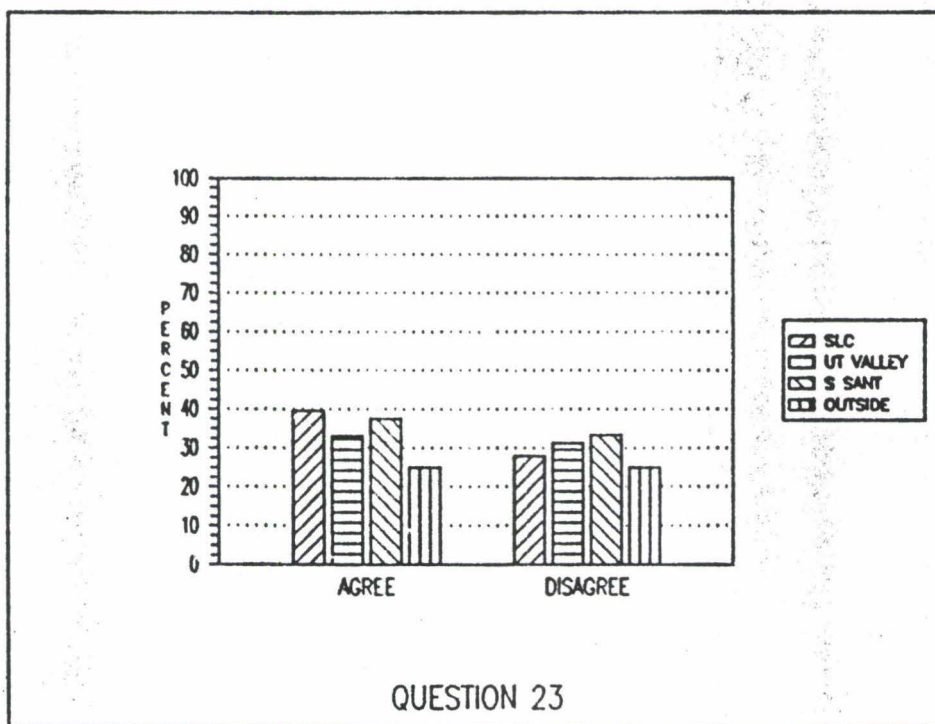
QUESTION 25

Question 25. I prefer to camp within sight of other camping parties.

Questions 23 through 29 were asked to determine which site attributes were important and what changes to dispersed sites would be acceptable. As expected, the majority of the respondents would prefer to camp alone (76.8%) with just their own party (Table XI). They prefer to be out of sight (47.7%) (Table XII) and out of hearing (56.0%) of other camps and would prefer to camp out of sight (44.8%) of the Nebo Scenic Loop road. When comparing these percentages, the respondents use different definitions of being alone. Where camping alone was important to a strong majority, out of sight, out of hearing, and out of sight of the road carried a very weak majority with almost a third of the respondents neutral on these site attributes.

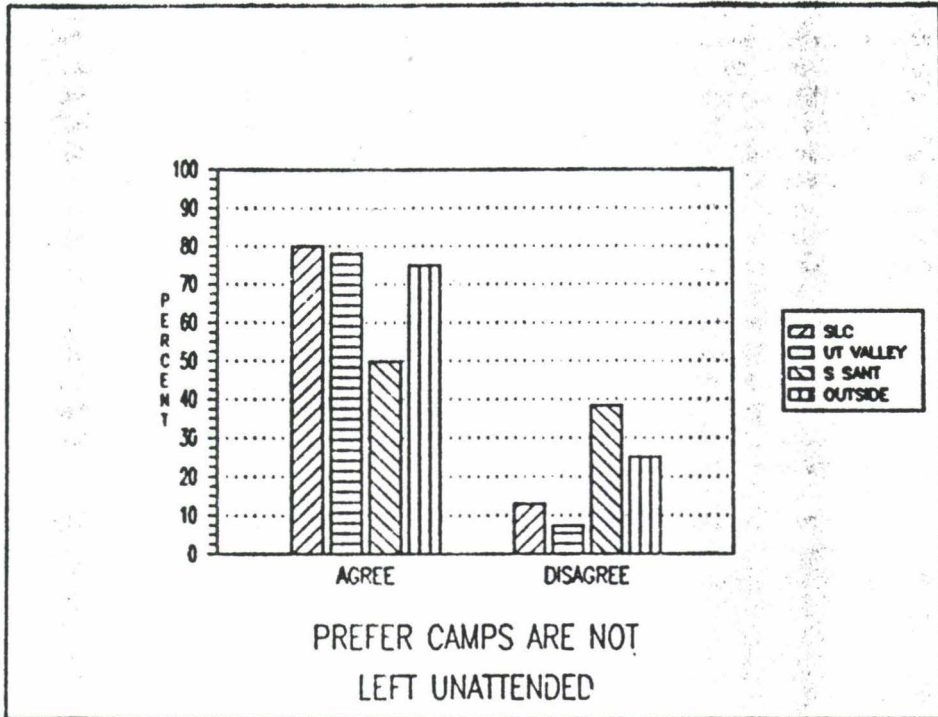
When asked if they would camp in dispersed sites if hardened (graveled), their response was split. Approximately one-third would continue to camp, one-third would not, and one-third remained neutral. Group response was fairly consistent (Table XIII). Part of the reason for this response may be that the respondents do not want to be restricted to just one place to park, and that they may not perceive the resource problems that management has identified.

TABLE XIII



Question 23. I would camp in dispersed areas if they were graveled.

TABLE XIV



The respondents agreed very strongly with questions restricting noise late at night (82.5%) and not allowing camps to be left unattended (75.9%) (Table XIV). These responses indicate that when an issue is perceived as a problem by the users, they are supportive of the necessary restrictions. This response also indicates that only a small minority of the recreationists find it acceptable to leave their camping equipment unattended in order to reserve their campsite.

Questionnaire Comments

There were 262 written comments (57%), included in the 446 responses to the questionnaire. The comments covered a wide variety of different areas of recreation management on the National Forests. Comments covered developed camping (36%), campground fees (11%), dispersed recreation (24%), campground reservations (5%), and others including noise, ATV's, road closures, and Forest Service regulations. The comments concerning campground fees, except for two, all indicated that the fees are too high. The number of comments can be partially attributed to the fact that in 1988, the Uinta National Forest raised the fees significantly to a level commensurate with the cost of operation and maintenance of the facilities. While these people would prefer to pay lower fees, the increased campground use in 1988 indicates they are still willing to pay fair market value for use of the facilities.

Though the comments covered a wide variety of subjects, some of the comments indicate areas where interpretation is needed. One is livestock grazing on the National Forest. The comments received in this area indicate that many people do not understand why livestock are on the National Forest and how they are managed. Some of the comments were not specific to the Nebo area. Several comments complained of situations that have been resolved on the Uinta National Forest but may exist elsewhere.

The majority of comments offered constructive criticism, and the number of written comments strongly indicated that the people using the Nebo area are very interested, and want to be involved, in the management of the National Forest.

VI.

CONCLUSIONS

Dispersed camping along the Nebo Scenic Loop is a highly desired recreational activity. The demographics of the adjacent, highly populated urban areas indicate that the demand for recreational opportunities, both dispersed and developed, will continue to increase. For the last two years the Uinta National Forest has enjoyed a 12-15% growth in recreational camping.

In order for management to provide for the needs and desires of the customer, it is essential that it clearly identifies the customer. These results show that while individuals from the smaller, adjacent communities actively enjoy the National Forest, the majority of our customers come from the larger population areas of Utah Valley (53.8%), and Salt Lake Valley (36.7%). The average visitor is 44 years of age and visits the Nebo area 2 times each year, stays an average of 2.7 days, and has an average of 6.5 people in their group. While the majority of respondents (87%), visit the Nebo Scenic Loop area for the developed facilities, over 50% also visit for dispersed camping opportunities.

The Uinta National Forest Resource Management Plan calls for increasing or maintaining the dispersed recreation opportunities. Because of the resource limitations it is not feasible to increase the number of dispersed camping sites, but it is possible to maintain present opportunities.

It is also possible to provide for greater customer satisfaction by constructing additional developed recreational facilities. The questionnaire results indicate that 55% of the respondents desire more developed facilities and 13% of the respondents use dispersed camp sites only because the developed campgrounds are full. While more developed campgrounds would provide greater customer satisfaction for this segment of the respondents, in all likelihood the demand for the dispersed sites will not decrease. Though additional capacity can be constructed in developed

sites, the demand will always exceed the supply of dispersed sites. Some dispersed campers will be forced into developed sites, some will instead, travel to other, relatively close areas for their recreational activity, and a certain segment will probably become dissatisfied to the degree that they will not camp as often.

It is also important for managers to understand the difference in perceived values between the groups. The group South of Santaquin is less receptive to camping site restrictions compared to the other groups. Their responses indicate that they do not perceive resource problems, and from the situations in Hobbie Creek and Salt Creek, site substitution does not appear to be an acceptable alternative to any loss of opportunity.

The challenge will be to provide for dispersed camping opportunities while implementing the direction stated in the Forest Plan; to achieve visual quality objectives of retention along the road and mitigate resource damage. It is anticipated that the demand for high quality scenic values will increase along the Nebo Loop. The local communities at either end of the Loop are beginning to actively market the scenic opportunities that are available for the summer travelers who travel along Interstate 15. The Nebo Scenic Loop has been nominated to become part of Utah State Scenic Highway system and also is expected to be designated a National Scenic Byway. As more customers from out of the area are attracted to this area, the demand for both dispersed and developed sites will increase.

Recommendations

1. Inventory all existing areas used for dispersed camping and determine:
 - a. If closure of the site is necessary to meet Forest Plan direction.
 - b. How resource problems (physical or social) can be mitigated.
2. Inventory the Loop for areas where access roads could be constructed to provide for dispersed camping opportunities away from the Nebo Scenic loop road. These areas will be selected by using the following criteria:
 - a. Area is sufficiently screened from the paved road.
 - b. Access will be hardened and sites will be designated to prevent resource problems from occurring.
3. Analyze existing areas away from the paved road and, where feasible, improve access to encourage camping in these areas. Designate sites through hardening access and discourage use in resource problem areas by placing natural material barriers.
4. Where practical, plant screening vegetation (conifers) between existing dispersed sites and the road.
5. To minimize loss of camping opportunities, restrict the sites only where hardening techniques will not provide for the resources.
6. To reduce soil erosion and vegetation loss, change the present Forest Order from allowing travel anywhere up to 150 feet off of existing roads to access camp sites, to allowing access to camping sites only by designated travel routes.

7. **Begin hardening efforts on the access roads first. Limit vehicle travel to the designated roads.**
8. **When possible time the closure of an area to coincide with expansion of a new area.**
9. **Develop an intensive educational and interpretive program to increase customer understanding of management's concerns with resource problems and visual impacts.**
 - a. **Implement these guidelines in an area in order to demonstrate that dispersed camping can be accomplished with minimal resource damage.**
 - b. **Develop an understanding with our customers by involving them in the rehabilitation of the sites.**
 - c. **Use personal conversations and interpretive programs in the developed campgrounds to increase environmental awareness with our customers.**
10. **Implement a Forest order prohibiting loud, disruptive behavior between the hours of 10:00 p.m. and 6:00 a.m. when campers are within hearing or sight of other camps.**
11. **Implement a Forest order prohibiting leaving camping equipment unattended for more than 24 hours to eliminate camping spots being occupied by vacant trailers. (Use 24 hours instead of 48 hours to reduce enforcement problems)**
12. **Develop a method to monitor the effectiveness of resource mitigation measures, user acceptance, and changes in customer expectations and needs.**

By managing the dispersed recreation sites to insure a high standard of quality, we can expect customers to take greater care in reducing their impacts to the sites. We have found that well-maintained, high quality, developed sites have much less vandalism and require less clean up than older, lower quality sites. It is essential for management to realize that to change attitudes of the customers, customers must be educated to understand the resource problems associated with dispersed camping. Therefore, we must first showcase our management. Customers will have less tendency to negatively impact resources when they are educated, through interpretive programs and demonstrations on the ground, by managers who are concerned with reducing resource problems.

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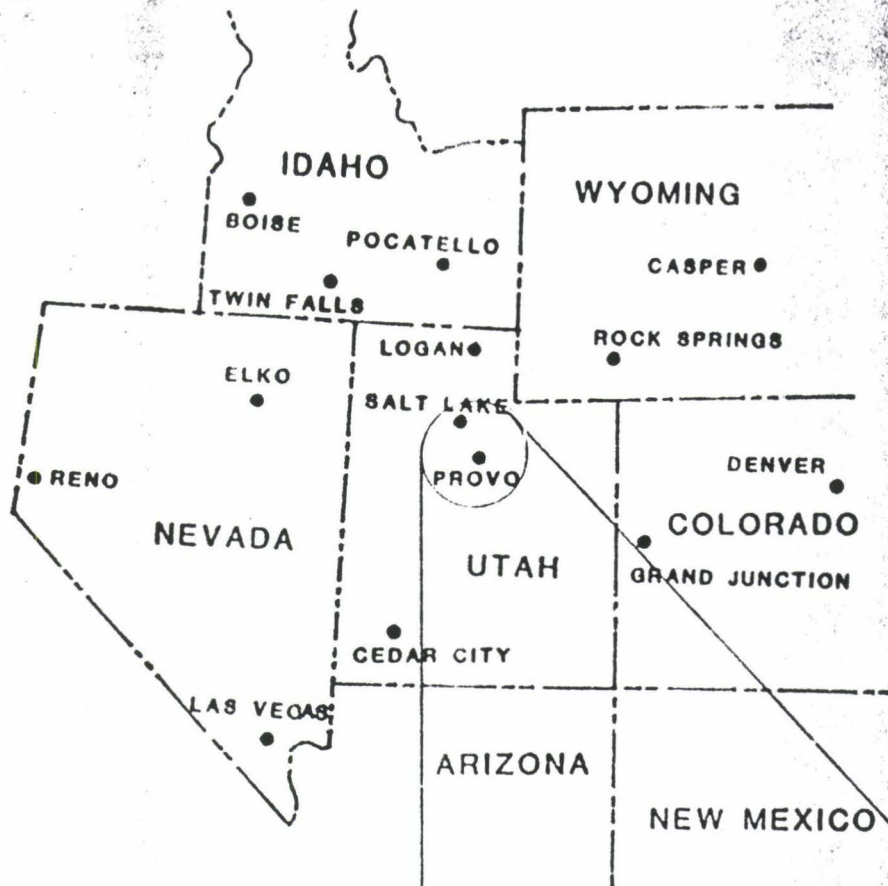
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APPENDIX

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MAPS

1. Vicinity Map
2. Nebo Unit

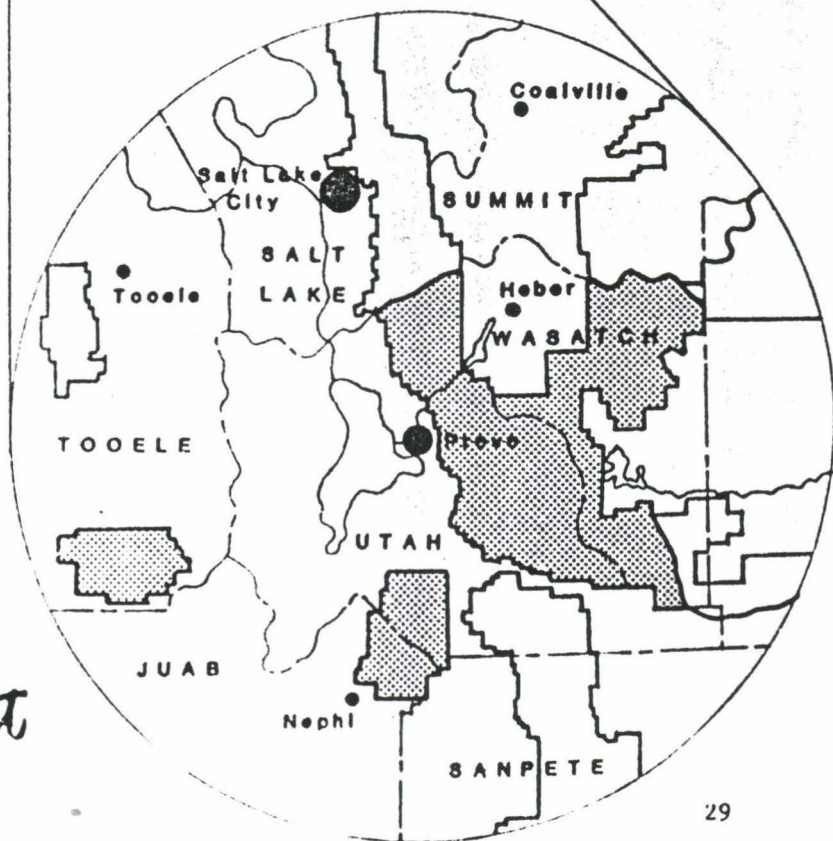


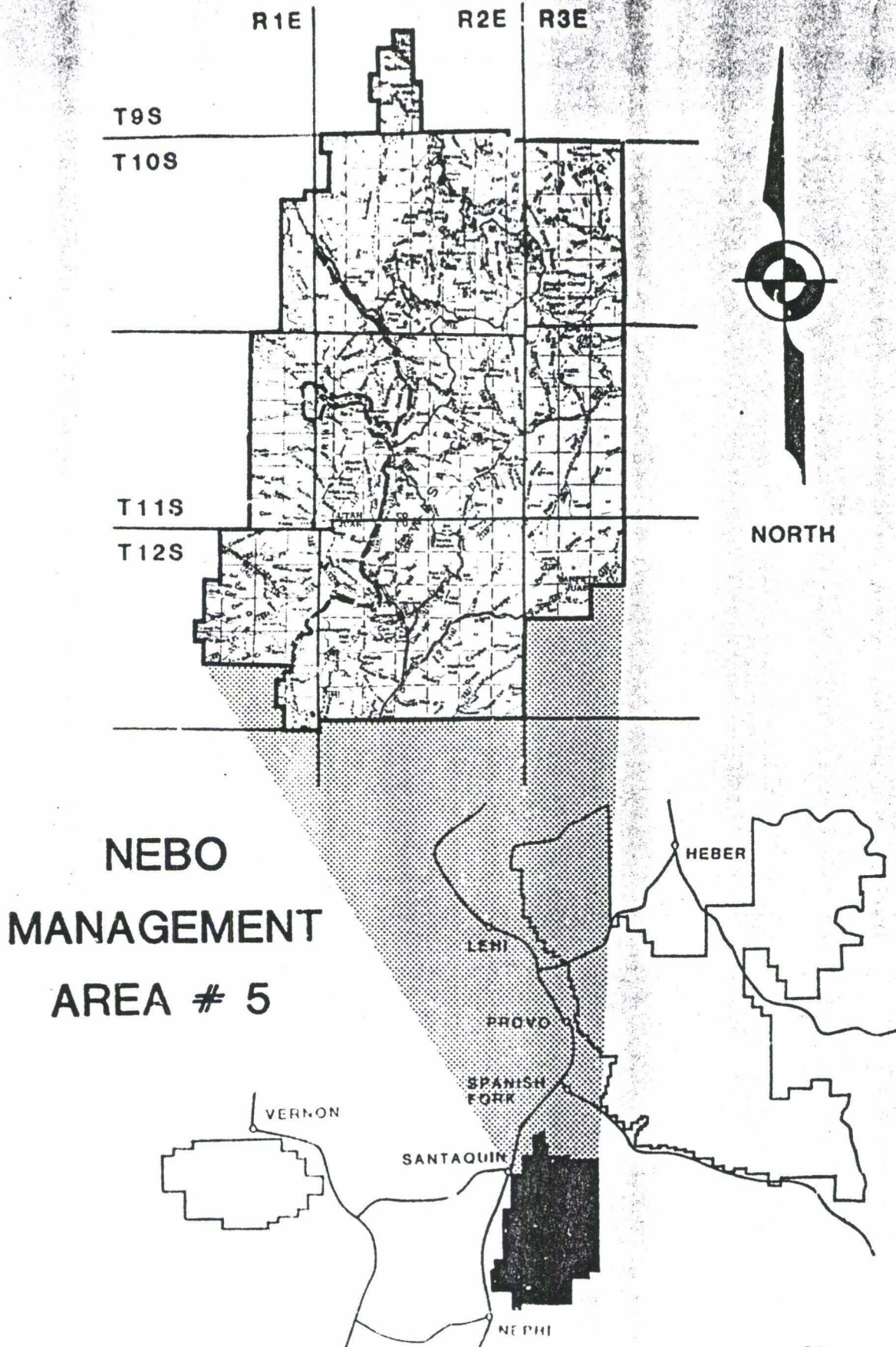
NORTH

UINTA

National Forest

VICINITY MAP





QUESTIONNAIRE

1. Cover letter
2. Questionnaire

College of Forest and Recreation Resources

DEPARTMENT OF PARKS, RECREATION AND TOURISM MANAGEMENT



January 9, 1989

Dear National Forest User:

In an effort to determine the public's desires and needs for camping opportunities along the Nebo Scenic Loop on the Uinta National Forest, we are asking for your input.

In cooperation with Clemson University, the attached questionnaire has been developed to help determine what camping opportunities the public would like along the Nebo Scenic Loop.

The results of this questionnaire will be used by the Forest Service in future planning.

We ask that you to fill out the questionnaire and return it in the prepaid envelope by February 1, 1989.

Your prompt response and cooperation is appreciated.

Sincerely,

A handwritten signature in cursive script that reads 'Thomas L. Tidwell'.

THOMAS L. TIDWELL

RECREATION QUESTIONNAIRE

Please fill in the blanks.

1. How many times a year do you visit the Uinta National Forest? _____
2. When you visit the Uinta National Forest in which of the following activities do you participate? (Please check the appropriate lines)
- | | |
|---|---|
| <input type="checkbox"/> Scenic driving | <input type="checkbox"/> Camping in developed campgrounds |
| <input type="checkbox"/> Backpacking (overnight) | <input type="checkbox"/> Camping off sides of roads |
| <input type="checkbox"/> Sledding/tubing (snowfun) | <input type="checkbox"/> Horseback riding |
| <input type="checkbox"/> Cross-Country Skiing | <input type="checkbox"/> Wildlife observation |
| <input type="checkbox"/> Photography | <input type="checkbox"/> Snowmobiling |
| <input type="checkbox"/> ATV | <input type="checkbox"/> Day hiking |
| <input type="checkbox"/> Fishing | <input type="checkbox"/> Hunting |
| <input type="checkbox"/> Other(Please write in) _____ | |

Please rate how much you agree or disagree with the following statements by circling the appropriate numbers. 1=Agree Very Strongly (AVS), 2=Agree Strongly (AS), 3=Agree (A), 4=Neither Agree or Disagree (N), 5=Disagree (D), 6=Disagree Strongly (DS), 7=Disagree Very Strongly (DVS)

AVS..AS..A..N..D..DA..DVS

3. I would like to see more developed campgrounds (such as Payson Lakes and Blackhawk) constructed in the Uinta National Forest. 1 2 3 4 5 6 7
4. I don't mind paying when I go camping 1 2 3 4 5 6 7
5. I would like to buy pre-cut wood at the developed campgrounds . . 1 2 3 4 5 6 7
6. I am satisfied with the current facilities provided by the Uinta National Forest in the existing campgrounds. 1 2 3 4 5 6 7
7. When I drive along the Nebo Scenic Loop Road I notice campers and trailers camped along the road (dispersed camping) 1 2 3 4 5 6 7
8. The presence of dispersed camping along the road negatively influences my impressions of the scenic quality. 1 2 3 4 5 6 7
9. Dispersed camping along the roads should be kept to minimum . . . 1 2 3 4 5 6 7
10. I would like to see more wildlife along the loop road 1 2 3 4 5 6 7

11. Have you ever camped in dispersed areas along main or paved road? (Dispersed areas are defined as camping along road as opposed to camping in developed campgrounds such as Payson Lakes, Ponderosa, or Palmyra campgrounds)

☐ Yes ☐ No

12. Have you ever camped in dispersed areas along a dirt or back road?

☐ Yes ☐ No

Please fill in the blanks

13. What is your current age? _____ 14. What is your zip code? _____
15. What is your sex? _____ (M or F)

If you answered Yes to either question 11 or 12 please answer questions 17-40 on the following page. If you answered No, you do not need to answer any more questions. Thank you very much for your cooperation.

17. What is the average number of days you stay in one dispersed area? _____

18. What is the average number of people in your party? _____

Please rate how much you agree or disagree with the following statements by circling the appropriate numbers. 1=Agree Very Strongly (AVS), 2=Agree Strongly (AS), 3=Agree (A), 4=Neither Agree or Disagree (N), 5=Disagree (D), 6=Disagree Strongly (DS), 7=Disagree Very Strongly (DVS).

AVS..AS..A..N..D..DA..DVS

19. I camp in dispersed areas only because the developed campgrounds are full. 1 2 3 4 5 6 7
20. I prefer dispersed camping because I don't have to pay a camping fee 1 2 3 4 5 6 7
21. I prefer dispersed camping because it can accommodate our family reunion. 1 2 3 4 5 6 7
22. I am satisfied with the dispersed areas as they are now . . . 1 2 3 4 5 6 7
23. I would camp in dispersed areas if they were graveled 1 2 3 4 5 6 7
24. I prefer to camp in an area alone-with just my camping party. 1 2 3 4 5 6 7
25. I prefer to camp within sight of other camping parties. . . . 1 2 3 4 5 6 7
26. I prefer to camp within hearing distance of other parties . . 1 2 3 4 5 6 7
27. I would prefer there be a requirement that camps not be left unattended for more than 48 hours to reduce camping spots being occupied by unused trailers 1 2 3 4 5 6 7
28. I would prefer that there be a requirement prohibiting loud noises in dispersed camps between the hours of 10 p.m. and 6 a.m. 1 2 3 4 5 6 7
29. I would prefer to camp out of sight of the Nebo Scenic Loop . 1 2 3 4 5 6 7

Please rate the importance of each item when you are selecting your camping area by circling the appropriate numbers. 1=Very Important (VI), 2=Important (I), 3=Somewhat Important (SI), 4=Neither Important or Unimportant (N), 5=Somewhat Unimportant (SU), 6=Unimportant (U), 7=Very Unimportant (VU).

VI..I..SI..N..SU..U..VU

30. Presence of Wildlife. 1 2 3 4 5 6 7
31. Natural water (lake, spring or stream). 1 2 3 4 5 6 7
32. Close to piped water sources. 1 2 3 4 5 6 7
33. Shade 1 2 3 4 5 6 7
34. Pleasant view 1 2 3 4 5 6 7
35. Access to main road 1 2 3 4 5 6 7
36. Access to trails. 1 2 3 4 5 6 7
37. Seclusion 1 2 3 4 5 6 7
38. Large enough area 1 2 3 4 5 6 7
39. Familiar with site. 1 2 3 4 5 6 7
40. Level ground. 1 2 3 4 5 6 7

Other important items (please write them in) _____

YOUR COMMENTS, CONCERNS, OR SUGGESTIONS ARE WELCOME ON THE BACK

Histogram

Response to question # 3

I would like to see more developed campgrounds:

Group	Freq	%Freq	
AVS	7	1.6	.*
AS	166	37.2	*****
A	70	15.7	*****
N	92	20.6	*****
D	46	10.3	*****
DS	28	6.3	****
DVS	37	8.3	*****

Univariate Statistics

For question number 3:

Mean - Average	2.598655	Number of Observations	446
Standard Deviation	1.794598	Number of Missing Values	0
Coefficient of Variation	.6905873	Sum of weights	446
Variance	3.220583	Sum of observations	1159
Standard Error of Mean	8.497669E-02	Adjusted Sum of Squares	1433.159
T-Value Testing Mean=0	30.5808	Adjusted Sum of Cubes	2583.408
100-%tile (Maximum)	7	Adjusted Sum of Quartics	14959.68
90-%tile	5	Coefficient of Skewness	4.761583E-02
75-%tile	3	Coefficient of Kurtosis	7.283388E-03
50-%tile (Median)	2	Range	7
25-%tile	1	Inner Quartile Range	2
10-%tile	1		
0-%tile (Minimum)	0		

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Col(28) Location Code	17) More Developed Camping					Total
	AVS AS	A	N	D	DS DVS	
1 SLC	108	28	12	9	4	161
	67.1	17.4	7.5	5.6	2.5	100.0
	45.8	30.4	26.1	32.1	10.8	36.7
	24.6	6.4	2.7	2.1	0.9	36.7
2 UT VALLEY	115	59	20	16	26	236
	48.7	25.0	8.5	6.8	11.0	100.0
	48.7	64.1	43.5	57.1	70.3	53.8
	26.2	13.4	4.6	3.6	5.9	53.8
3 S SANT	8	3	9	2	7	29
	27.6	10.3	31.0	6.9	24.1	100.0
	3.4	3.3	19.6	7.1	18.9	6.6
	1.8	0.7	2.1	0.5	1.6	6.6
4 OUTSIDE	5	2	5	1	0	13
	38.5	15.4	38.5	7.7	0.0	100.0
	2.1	2.2	10.9	3.6	0.0	3.0
	1.1	0.5	1.1	0.2	0.0	3.0
Total	236.0	92.0	46.0	28.0	37.0	439.0
	53.8	21.0	10.5	6.4	8.4	100.0
	100.0	100.0	100.0	100.0	100.0	100.0
	53.8	21.0	10.5	6.4	8.4	100.0

Pearson's Contingency Coefficient	0.3402
Spearman's rho (rank correlation)	0.2488
Pearson's product moment correlation	0.2282

Histogram

Response to question # 4

I don't mind paying when I go camping:

Group	Freq	%Freq	
AVS	4	0.9	:*
AS	85	19.1	:*****
A	67	15.0	:*****
N	153	34.3	:*****
D	48	10.8	:*****
DS	37	8.3	:*****
DVS	52	11.7	:*****

Univariate Statistics

For question number 4:

Mean - Average	3.141256	Number of Observations	446
Standard Deviation	1.732765	Number of Missing Values	0
Coefficient of Variation	.5516154	Sum of weights	446
Variance	3.002474	Sum of observations	1401
Standard Error of Mean	8.204879E-02	Adjusted Sum of Squares	1336.101
T-Value Testing Mean=0	38.28522	Adjusted Sum of Cubes	1583.548
100-%tile (Maximum)	7	Adjusted Sum of Quartics	11498.13
90-%tile	6	Coefficient of Skewness	3.242442E-02
75-%tile	4	Coefficient of Kurtosis	6.44093E-03
50-%tile (Median)	3	Range	7
25-%tile	2	Inner Quartile Range	2
10-%tile	1		
0-%tile (Minimum)	0		

Histogram

Response for question number 5

I would like to buy pre-cut wood at the developed campgrounds:

Group	Freq	%Freq
AVS	10	2.2 : **
AS	45	10.1 : *****
A	36	8.1 : *****
N	80	17.9 : *****
D	132	29.6 : *****
DS	60	13.5 : *****
DVS	83	18.6 : *****

Histogram

Response to question number 6

I am satisfied with the current facilities provided in existing campgrounds:

Group	Freq	%Freq
AVS	9	2.0 : *
AS	53	11.9 : *****
A	75	16.8 : *****
N	165	37.0 : *****
D	61	13.7 : *****
DS	46	10.3 : *****
DVS	37	8.3 : *****

Univariate Statistics

Column (20) Label: Q6

Mean - Average	3.154709	Number of Observations	446
Standard Deviation	1.518667	Number of Missing Values	0
Coefficient of Variation	.4813969	Sum of weights	446
Variance	2.306349	Sum of observations	1407
Standard Error of Mean	7.191096E-02	Adjusted Sum of Squares	1026.325
T-Value Testing Mean=0	43.86965	Adjusted Sum of Cubes	689.0048
100-%tile (Maximum)	7	Adjusted Sum of Quartics	7146.976
90-%tile	5	Coefficient of Skewness	2.095534E-02
75-%tile	4	Coefficient of Kurtosis	6.78504E-03
50-%tile (Median)	3	Range	7
25-%tile	2	Inner Quartile Range	2
10-%tile	1		
0-%tile (Minimum)	0		

Histogram

Response to question number 7

When I drive along the Nebo Scenic Loop Road, I notice campers and trailers camped along the road, dispersed camping.

Group	Freq	%Freq
AVS	9	2.0 :*
AS	88	19.7 :*****
A	71	15.9 :*****
N	145	32.5 :*****
D	79	17.7 :*****
DS	32	7.2 :*****
DVS	22	4.9 :***

Univariate Statistics

For question number 7

Mean - Average	2.878924	Number of Observations	446
Standard Deviation	1.46359	Number of Missing Values	0
Coefficient of Variation	.5153278	Sum of weights	446
Variance	2.201038	Sum of observations	1284
Standard Error of Mean	.07025	Adjusted Sum of Squares	979.4619
T-Value Testing Mean=0	40.98112	Adjusted Sum of Cubes	674.5603
100-%tile (Maximum)	7	Adjusted Sum of Quartics	6746.447
90-%tile	5	Coefficient of Skewness	2.200592E-02
75-%tile	4	Coefficient of Kurtosis	7.032343E-03
50-%tile (Median)	3	Range	7
25-%tile	2	Inner Quartile Range	2
10-%tile	1		
0-%tile (Minimum)	0		

Histogram

Response to question number 8

The presence of dispersed camping along the road negatively influences my impression of the scenic quality:

Group	Freq	%Freq	
AVS	9	2.0	**
AS	53	11.9	*****
A	47	10.5	*****
N	49	11.0	*****
D	107	24.0	*****
DS	75	16.8	*****
DVS	106	23.8	*****

Univariate Statistics

For question number 8

Mean - Average	4.049327	Number of Observations	446
Standard Deviation	1.966526	Number of Missing Values	0
Coefficient of Variation	.4856426	Sum of weights	446
Variance	3.867224	Sum of observations	1806
Standard Error of Mean	.0931177	Adjusted Sum of Squares	1720.915
T-Value Testing Mean=0	43.48612	Adjusted Sum of Cubes	-376.7181
100-%tile (Maximum)	7	Adjusted Sum of Quartics	13963.2
90-%tile	7	Coefficient of Skewness	-5.276882E-03
75-%tile	5	Coefficient of Kurtosis	4.714833E-03
50-%tile (Median)	4	Range	7
25-%tile	3	Inner Quartile Range	2
10-%tile	1		
0-%tile (Minimum)	0		

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Col(22) QUESTION # 8 - AFFECTS NEGATIVELY

Col(21) QUESTION # 7 - NOTICE DIS. CAM	1 AVS	2 AS	3 A	4 N	5 D	6 DS	7 DVS	Total
1 AVS	20 23.3 37.7	9 10.5 19.6	8 9.3 17.0	7 8.1 6.6	14 16.3 18.7	7 8.1 21.9	21 24.4 29.6	86 100.0 20.0
2 AS	8 11.4 15.1	11 15.7 23.9	10 14.3 21.3	15 21.4 14.2	8 11.4 10.7	7 10.0 21.9	11 15.7 15.5	70 100.0 16.3
3 A	9 6.3 17.0	16 11.3 34.8	14 9.9 29.8	41 28.9 38.7	32 22.5 42.7	9 6.3 28.1	21 14.8 29.6	142 100.0 33.0
4 N	5 6.3 9.4	5 6.3 10.9	10 12.7 21.3	39 49.4 36.8	8 10.1 10.7	3 3.8 9.4	9 11.4 12.7	79 100.0 18.4
5 D	4 12.9 7.5	4 12.9 8.7	5 16.1 10.6	3 9.7 2.8	11 35.5 14.7	1 3.2 3.1	3 9.7 4.2	31 100.0 7.2
6 DS	1 9.1 1.9	1 9.1 2.2	0 0.0 0.0	0 0.0 0.0	2 18.2 2.7	5 45.5 15.6	2 18.2 2.8	11 100.0 2.6
7 DVS	6 54.5 11.3	0 0.0 0.0	0 0.0 0.0	1 9.1 0.9	0 0.0 0.0	0 0.0 0.0	4 36.4 5.6	11 100.0 2.6
Total	53.0 12.3 100.0	46.0 10.7 100.0	47.0 10.9 100.0	106.0 24.7 100.0	75.0 17.4 100.0	32.0 7.4 100.0	71.0 16.5 100.0	430.0 100.0 100.0

Histogram

Response to question number 9

Dispersed camping along the roads should be kept to a minimum:

Group	Freq	%Freq	
AVS	7	1.6	:*
AS	78	17.5	:*****
A	61	13.7	:*****
N	118	26.5	:*****
D	67	15.0	:*****
DS	36	8.1	:*****
DVS	79	17.7	:*****

A cross tabulation of question number nine with those that hunt and those that don't hunt. (This was the only activity that showed any correlation between the respondents agreement or disagreement with this question)

9. Dispersed camping along the roads should be kept to a minimum

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Response to Question # 9	Does Not Hunt	Does Hunt	Total
Very Strongly Agree & Strongly Agree	99 71.2 38.4 22.6	40 28.8 22.1 9.1	139 100.0 31.7 31.7
Agree	81 68.6 31.4 18.5	37 31.4 20.4 8.4	118 100.0 26.9 26.9
Neutral	40 59.7 15.5 9.1	27 40.3 14.9 6.2	67 100.0 15.3 15.3
Disagree	18 50.0 7.0 4.1	18 50.0 9.9 4.1	36 100.0 8.2 8.2
Disagree Very Strongly & Disagree Strongly	20 25.3 7.8 4.6	59 74.7 32.6 13.4	79 100.0 18.0 18.0
Total Count	258.0	181.0	439.0
Row %	58.8	41.2	100.0
Column %	100.0	100.0	100.0
Table %	58.8	41.2	100.0

Pearson's Contingency Coefficient
Spearman's rho (rank correlation)
Pearson's product moment correlation

0.3235
0.2995
0.3247

A cross tabulation of questions number nine and nineteen. The row and column percentage information probably shows the most correlation.

9. Dispersed camping along the roads should be kept to a minimum
19. I camp in dispersed areas only because the developed campgrounds are full:

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Response to: Question # 9

Question # 19		& AS	AVS A	N	D	& DS	DVS
No Response	58	19	52	23	13	165	
They are not	35.2	11.5	31.5	13.9	7.9	100.0	
dispersed	58.0	38.8	48.6	30.7	12.3	37.8	
campers.	13.3	4.3	11.9	5.3	3.0	37.8	
Agree Very	20	15	9	7	10	61	
Strongly &	32.8	24.6	14.8	11.5	16.4	100.0	
Agree	20.0	30.6	8.4	9.3	9.4	14.0	
Strongly	4.6	3.4	2.1	1.6	2.3	14.0	
Agree	6	6	20	10	6	48	
	12.5	12.5	41.7	20.8	12.5	100.0	
	6.0	12.2	18.7	13.3	5.7	11.0	
	1.4	1.4	4.6	2.3	1.4	11.0	
Neither Agree	6	3	11	14	24	58	
or	10.3	5.2	19.0	24.1	41.4	100.0	
Disagree	6.0	6.1	10.3	18.7	22.6	13.3	
	1.4	0.7	2.5	3.2	5.5	13.3	
Disagree	6	5	10	13	15	49	
	12.2	10.2	20.4	26.5	30.6	100.0	
	6.0	10.2	9.3	17.3	14.2	11.2	
	1.4	1.1	2.3	3.0	3.4	11.2	
Disagree	4	2	5	8	38	56	
Strongly &	7.1	2	8.9	14.3	67.9	100.0	
Disagree Very	4.0	10	4.7	10.7	35.8	12.8	
Strongly	0.9	0.2	1.1	1.8	8.7	12.8	
Total	Count	100.0	49.0	107.0	75.0	106.0	437.0
	Row %	22.9	11.2	24.5	17.2	24.3	100.0
	Column %	100.0	100.0	100.0	100.0	100.0	100.0
	Table %	22.9	11.2	24.5	17.2	24.3	100.0

Pearson's Contingency Coefficient 0.4974

Spearman's rho (rank correlation) 0.4443

Pearson's product moment correlation 0.4498

Histogram

Response to question number 10

I would like to see more wildlife along the loop road:

Group	Freq	%Freq	
AVS	9	2.0	:*
AS	145	32.5	:*****
A	100	22.4	:*****
N	100	22.4	:*****
D	74	16.6	:*****
DS	11	2.5	:**
DVS	7	1.6	:*

Histogram

Response to question number 11

Have you camped along a main or paved road?

Group	Freq	%Freq	
No	244	54.7	:*****
Yes	202	45.3	:*****

Histogram

Response to question number 12

Have you camped in a dispersed area on a back/dirt road?

Column (26) Label: Q12

Group	Freq	%Freq	
No	182	40.8	:*****
Yes	264	59.2	:*****

Dispersed Campers

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Expected Value

Contribution to Chi-Square

Col(28) code	Col(11) disc		Total
	1 .5 to .5	2 .5 to 1. 5	
1	106 65.0 42.6 23.8 91 2.5	57 35.0 28.9 12.8 72 3.1	163 100.0 36.5 36.5 163 5.6
2	127 52.9 51.0 28.5 134 0.4	113 47.1 57.4 25.3 106 0.5	240 100.0 53.8 53.8 240 0.8
3	7 24.1 2.8 1.6 16 5.2	22 75.9 11.2 4.9 13 6.6	29 100.0 6.5 6.5 29 11.8
4	9 64.3 3.6 2.0 8 0.2	5 35.7 2.5 1.1 6 0.2	14 100.0 3.1 3.1 14 0.4
Total	249.0 55.8 100.0 55.3 249.0 8.2	197.0 44.2 100.0 44.2 197.0 10.4	446.0 100.0 100.0 100.0 446.0 18.6

Contingency Table Statistics

Column(28) versus Column(11)

Chi Square with 3 degrees of freedom	18.6388
Probability > Chi Square	0.0003
Phi	0.2044
Cramer's V	0.2044
Pearson's Contingency Coefficient	0.2003
Tschuprow's T	0.1553
Lambda A .. Rows dependent	0.0000
Lambda B .. Columns dependent	0.0761
Symmetric Lambda	0.0372
Kendall's tau-B	0.0821
Kendall's tau-B (with correction for ties)	0.1543
Kendall's tau-C	0.1092
Gamma	0.2863
Spearman's rho (rank correlation)	0.1602
Pearson's product moment correlation	0.1394

Question 9

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Col(28) code	Col(23) q9					Total
	1 .5 to 2.5	2 2.5 to 3.5	3 3.5 to 4.5	4 4.5 to 5.5	5 5.5 to 7.5	
1	66 41.0 47.1 15.0	48 29.8 40.7 10.9	19 11.8 28.4 4.3	10 6.2 27.8 2.3	18 11.2 22.8 4.1	161 100.0 36.6 36.6
2	69 29.1 49.3 15.7	64 27.0 54.2 14.5	38 16.0 56.7 8.6	22 9.3 61.1 5.0	44 18.6 55.7 10.0	237 100.0 53.9 53.9
3	3 10.3 2.1 0.7	2 6.9 1.7 0.5	4 13.8 6.0 0.9	3 10.3 8.3 0.7	17 58.6 21.5 3.9	29 100.0 6.6 6.6
4	2 15.4 1.4 0.5	4 30.8 3.4 0.9	6 46.2 9.0 1.4	1 7.7 2.8 0.2	0 0.0 0.0 0.0	13 100.0 3.0 3.0
Total	140.0 31.8 100.0 31.8	118.0 26.8 100.0 26.8	67.0 15.2 100.0 15.2	36.0 8.2 100.0 8.2	79.0 18.0 100.0 18.0	440.0 100.0 100.0 100.0

Question 9

Contingency Table Statistics

Column(28) versus Column(23)

Chi Square with 12 degrees of freedom	59.0613
Probability > Chi Square	0.0000
Phi	0.3664
Cramer's V	0.2115
Pearson's Contingency Coefficient	0.3440
Tschuprow's T	0.1968
Lambda A .. Rows dependent	0.0000
Lambda B .. Columns dependent	0.0600
Symmetric Lambda	0.0358
Kendall's tau-B	0.1379
Kendall's tau-B (with correction for ties)	0.2082
Kendall's tau-C	0.1720
Gamma	0.3115
Spearman's rho (rank correlation)	0.2389
Pearson's product moment correlation	0.2219

Question 23

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Col(28) code	Col(36) q23						Total
	1 .5 to .5	2 .5 to 2.5	3 2.5 to 3.5	4 3.5 to 4.5	5 4.5 to 5.5	6 5.5 to 7.5	
1	77	9	25	28	10	14	163
	47.2	5.5	15.3	17.2	6.1	8.6	100.0
	45.0	25.7	40.3	29.5	24.4	33.3	36.5
	17.3	2.0	5.6	6.3	2.2	3.1	36.5
2	83	22	30	56	27	22	240
	34.6	9.2	12.5	23.3	11.3	9.2	100.0
	48.5	62.9	48.4	58.9	65.9	52.4	53.8
	18.6	4.9	6.7	12.6	6.1	4.9	53.8
3	5	3	6	7	3	5	29
	17.2	10.3	20.7	24.1	10.3	17.2	100.0
	2.9	8.6	9.7	7.4	7.3	11.9	6.5
	1.1	0.7	1.3	1.6	0.7	1.1	6.5
4	6	1	1	4	1	1	14
	42.9	7.1	7.1	28.6	7.1	7.1	100.0
	3.5	2.9	1.6	4.2	2.4	2.4	3.1
	1.3	0.2	0.2	0.9	0.2	0.2	3.1
Total	171.0	35.0	62.0	95.0	41.0	42.0	446.0
	38.3	7.8	13.9	21.3	9.2	9.4	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	38.3	7.8	13.9	21.3	9.2	9.4	100.0

Question 23

Contingency Table Statistics

Column(28) versus Column(36)

Chi Square with 15 degrees of freedom	18.7782
Probability > Chi Square	0.2240
Phi	0.2052
Cramer's V	0.1185
Pearson's Contingency Coefficient	0.2010
Tschuprow's T	0.1043
Lambda A .. Rows dependent	0.0000
Lambda B .. Columns dependent	0.0073
Symmetric Lambda	0.0042
Kendall's tau-B	0.0800
Kendall's tau-B (with correction for ties)	0.1208
Kendall's tau-C	0.0958
Gamma	0.1816
Spearman's rho (rank correlation)	0.1393
Pearson's product moment correlation	0.1141

Question 24

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Col(27) age	Col(37) q24							Total
	1	2	3	4	5	6	7	
1 20 to 35	25 33.8 30.1 9.0	17 23.0 23.0 6.1	14 18.9 24.6 5.0	12 16.2 40.0 4.3	3 4.1 15.8 1.1	2 2.7 33.3 0.7	1 1.4 11.1 0.4	74 100.0 26.6 26.6
2 35 to 40	19 31.1 22.9 6.8	16 26.2 21.6 5.8	15 24.6 26.3 5.4	5 8.2 16.7 1.8	5 8.2 26.3 1.8	0 0.0 0.0 0.0	1 1.6 11.1 0.4	61 100.0 21.9 21.9
3 40 to 55	28 31.5 33.7 10.1	29 32.6 39.2 10.4	16 18.0 28.1 5.8	8 9.0 26.7 2.9	1 1.1 5.3 0.4	3 3.4 50.0 1.1	4 4.5 44.4 1.4	89 100.0 32.0 32.0
4 55 to 90	11 20.4 13.3 4.0	12 22.2 16.2 4.3	12 22.2 21.1 4.3	5 9.3 16.7 1.8	10 18.5 52.6 3.6	1 1.9 16.7 0.4	3 5.6 33.3 1.1	54 100.0 19.4 19.4
Total	83.0 29.9 100.0 29.9	74.0 26.6 100.0 26.6	57.0 20.5 100.0 20.5	30.0 10.8 100.0 10.8	19.0 6.8 100.0 6.8	6.0 2.2 100.0 2.2	9.0 3.2 100.0 3.2	278.0 100.0 100.0 100.0

Question 24

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Col(26) code	Col(37) q24					Total
	1 .5 to 2.5	2 2.5 to 3.5	3 3.5 to 4.5	4 4.5 to 5.5	5 5.5 to 7.5	
1	40 46.5 25.3 14.3	21 24.4 36.8 7.5	10 11.6 32.3 3.6	7 8.1 36.8 2.5	8 9.3 53.3 2.9	86 100.0 30.7 30.7
2	94 58.4 59.5 33.6	29 18.0 50.9 10.4	21 13.0 67.7 7.5	11 6.8 57.9 3.9	6 3.7 40.0 2.1	161 100.0 57.5 57.5
3	19 76.0 12.0 6.8	5 20.0 8.8 1.8	0 0.0 0.0 0.0	0 0.0 0.0 0.0	1 4.0 6.7 0.4	25 100.0 8.9 8.9
4	5 62.5 3.2 1.8	2 25.0 3.5 0.7	0 0.0 0.0 0.0	1 12.5 5.4 0.4	0 0.0 0.0 0.0	8 100.0 2.9 2.9
Total	158.0 56.4 100.0 56.4	57.0 20.4 100.0 20.4	31.0 11.1 100.0 11.1	19.0 6.8 100.0 6.8	15.0 5.4 100.0 5.4	280.0 100.0 100.0 100.0

Question 24

Contingency Table Statistics

Column(28) versus Column(37)

Chi Square with 12 degrees of freedom	14.9447
Probability > Chi Square	0.2445
Phi	0.2310
Cramer's V	0.1334
Pearson's Contingency Coefficient	0.2251
Tschuprow's T	0.1241
Lambda A .. Rows dependent	0.0168
Lambda B .. Columns dependent	0.0000
Symmetric Lambda	0.0083
Kendall's tau-B	-0.0900
Kendall's tau-B (with correction for ties)	-0.1512
Kendall's tau-C	-0.1121
Gamma	-0.2548
Spearman's rho (rank correlation)	-0.1693
Pearson's product moment correlation	-0.1605

Question 25

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Col(28) code	Col(38) q25					Total
	1 .5 to 2.5	2 2.5 to 3.5	3 3.5 to 4.5	4 4.5 to 5.5	5 5.5 to 7.5	
1	9 10.6 37.5 3.2	17 20.0 45.9 6.1	16 18.8 18.8 5.7	23 27.1 35.4 8.2	20 23.5 29.4 7.2	85 100.0 30.5 30.5
2	11 6.8 45.8 3.9	17 10.6 45.9 6.1	54 33.5 63.5 19.4	39 24.2 60.0 14.0	40 24.8 58.8 14.3	161 100.0 57.7 57.7
3	4 15.4 16.7 1.4	1 3.8 2.7 0.4	12 46.2 14.1 4.3	2 7.7 3.1 0.7	7 26.9 10.3 2.5	26 100.0 9.3 9.3
4	0 0.0 0.0 0.0	2 28.6 5.4 0.7	3 42.9 3.5 1.1	1 14.3 1.5 0.4	1 14.3 1.5 0.4	7 100.0 2.5 2.5
Total	24.0 8.6 100.0 8.6	37.0 13.3 100.0 13.3	85.0 30.5 100.0 30.5	65.0 23.3 100.0 23.3	68.0 24.4 100.0 24.4	279.0 100.0 100.0 100.0

Question 25

Contingency Table Statistics

Column(28) versus Column(38)

Chi Square with 12 degrees of freedom	20.4135
Probability > Chi Square	0.0597
Phi	0.2705
Cramer's V	0.1562
Pearson's Contingency Coefficient	0.2611
Tschuprow's T	0.1453
Lambda A .. Rows dependent	0.0000
Lambda B .. Columns dependent	0.0361
Symmetric Lambda	0.0224
Kendall's tau-B	0.0020
Kendall's tau-B (with correction for ties)	0.0030
Kendall's tau-C	0.0025
Gamma	0.0045
Spearman's rho (rank correlation)	0.0044
Pearson's product moment correlation	-0.0012

Question 26

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Col(28) code	Col(39) q26					Total
	1	2	3	4	5	
	.5 to 2.5	2.5 to 3.5	3.5 to 4.5	4.5 to 5.5	5.5 to 7.5	
1	9 10.7 39.1 3.3	11 13.1 47.8 4.0	19 22.6 25.3 6.9	17 20.2 30.4 6.2	28 33.3 28.6 10.2	84 100.0 30.5 30.5
2	10 6.3 43.5 3.6	11 7.0 47.8 4.0	44 27.8 58.7 16.0	35 22.2 62.5 12.7	58 36.7 59.2 21.1	158 100.0 57.5 57.5
3	3 12.0 13.0 1.1	0 0.0 0.0 0.0	11 44.0 14.7 4.0	2 8.0 3.6 0.7	9 36.0 9.2 3.3	25 100.0 9.1 9.1
4	1 12.5 4.3 0.4	1 12.5 4.3 0.4	1 12.5 1.3 0.4	2 25.0 3.6 0.7	3 37.5 3.1 1.1	8 100.0 2.9 2.9
Total	23.0 8.4 100.0 8.4	23.0 8.4 100.0 8.4	75.0 27.3 100.0 27.3	56.0 20.4 100.0 20.4	98.0 35.6 100.0 35.6	275.0 100.0 100.0 100.0

Question 26

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Col(38) q25	Col(39) q26							Total
	1	2	3	4	5	6	7	
1	9 75.0 69.2 3.3	0 0.0 0.0 0.0	0 0.0 0.0 0.0	2 16.7 2.7 0.7	0 0.0 0.0 0.0	0 0.0 0.0 0.0	1 8.3 1.9 0.4	12 100.0 4.4 4.4
2	0 0.0 0.0 0.0	5 41.7 55.6 1.8	2 16.7 8.7 0.7	2 16.7 2.7 0.7	2 16.7 3.6 0.7	0 0.0 0.0 0.0	1 8.3 1.9 0.4	12 100.0 4.4 4.4
3	2 5.4 15.4 0.7	0 0.0 0.0 0.0	16 43.2 69.6 5.9	13 35.1 17.6 4.8	0 0.0 0.0 0.0	4 10.8 9.3 1.5	2 5.4 3.7 0.7	37 100.0 13.6 13.6
4	1 1.2 7.7 0.4	3 3.5 33.3 1.1	2 2.4 8.7 0.7	50 58.8 67.6 18.4	16 18.8 28.6 5.9	9 10.6 20.9 3.3	4 4.7 7.4 1.5	85 100.0 31.3 31.3
5	0 0.0 0.0 0.0	1 1.6 11.1 0.4	2 3.3 8.7 0.7	5 8.2 6.8 1.8	35 57.4 62.5 12.9	10 16.4 23.3 3.7	8 13.1 14.8 2.9	61 100.0 22.4 22.4
6	0 0.0 0.0 0.0	0 0.0 0.0 0.0	1 3.7 4.3 0.4	1 3.7 1.4 0.4	2 7.4 3.6 0.7	18 66.7 41.9 6.6	5 18.5 9.3 1.8	27 100.0 9.9 9.9
Total	13.0 4.8 100.0 4.8	9.0 3.3 100.0 3.3	23.0 8.5 100.0 8.5	74.0 27.2 100.0 27.2	56.0 20.6 100.0 20.6	43.0 15.8 100.0 15.8	54.0 19.9 100.0 19.9	272.0 100.0 100.0 100.0
7	1 2.6 7.7 0.4	0 0.0 0.0 0.0	0 0.0 0.0 0.0	1 2.6 1.4 0.4	1 2.6 1.8 0.4	2 5.3 4.7 0.7	33 86.8 61.1 12.1	38 100.0 14.0 14.0
Total	13.0	9.0	23.0	74.0	56.0	43.0	54.0	272.0

Question 27

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Col (28) code	Col (40) q27							Total
	1	2	3	4	5	6	7	
1	39	12	17	6	4	2	5	85
	45.9	14.1	20.0	7.1	4.7	2.4	5.9	100.0
	37.9	24.5	27.4	18.2	36.4	25.0	31.3	30.1
	13.8	4.3	6.0	2.1	1.4	0.7	1.8	30.1
2	57	36	34	24	3	2	7	163
	35.0	22.1	20.9	14.7	1.8	1.2	4.3	100.0
	55.3	73.5	54.8	72.7	27.3	25.0	43.8	57.8
	20.2	12.8	12.1	8.5	1.1	0.7	2.5	57.8
3	5	1	7	3	3	3	4	26
	19.2	3.8	26.9	11.5	11.5	11.5	15.4	100.0
	4.9	2.0	11.3	9.1	27.3	37.5	25.0	9.2
	1.8	0.4	2.5	1.1	1.1	1.1	1.4	9.2
4	2	0	4	0	1	1	0	8
	25.0	0.0	50.0	0.0	12.5	12.5	0.0	100.0
	1.9	0.0	6.5	0.0	9.1	12.5	0.0	2.8
	0.7	0.0	1.4	0.0	0.4	0.4	0.0	2.8
Total	103.0	49.0	62.0	33.0	11.0	8.0	16.0	282.0
	36.5	17.4	22.0	11.7	3.9	2.8	5.7	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	36.5	17.4	22.0	11.7	3.9	2.8	5.7	100.0

Question 28

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Col(28) code	Col(41) q28							Total
	1	2	3	4	5	6	7	
1	43	11	21	4	5	0	3	87
	49.4	12.6	24.1	4.6	5.7	0.0	3.4	100.0
	34.1	20.0	42.0	16.7	38.5	0.0	33.3	31.1
	15.4	3.9	7.5	1.4	1.8	0.0	1.1	31.1
2	75	37	19	16	5	2	5	159
	47.2	23.3	11.9	10.1	3.1	1.3	3.1	100.0
	59.5	67.3	38.0	66.7	38.5	66.7	55.6	56.8
	26.8	13.2	6.8	5.7	1.8	0.7	1.8	56.8
3	6	4	10	2	3	1	0	26
	23.1	15.4	38.5	7.7	11.5	3.8	0.0	100.0
	4.8	7.3	20.0	8.3	23.1	33.3	0.0	9.3
	2.1	1.4	3.6	0.7	1.1	0.4	0.0	9.3
4	2	3	0	2	0	0	1	8
	25.0	37.5	0.0	25.0	0.0	0.0	12.5	100.0
	1.6	5.5	0.0	8.3	0.0	0.0	11.1	2.9
	0.7	1.1	0.0	0.7	0.0	0.0	0.4	2.9
Total	126.0	55.0	50.0	24.0	13.0	3.0	9.0	280.0
	45.0	19.6	17.9	8.6	4.6	1.1	3.2	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	45.0	19.6	17.9	8.6	4.6	1.1	3.2	100.0

Question 29

Cross Tabulation Results

Counts

Row Percentage

Column Percentage

Table Percentage

Col(28) code	Col(42) q29							Total
	1	2	3	4	5	6	7	
1	15	9	17	34	7	1	3	86
	17.4	10.5	19.8	39.5	8.1	1.2	3.5	100.0
	45.5	28.1	28.3	31.2	33.3	9.1	23.1	30.8
	5.4	3.2	6.1	12.2	2.5	0.4	1.1	30.8
2	12	23	38	62	12	6	8	161
	7.5	14.3	23.6	38.5	7.5	3.7	5.0	100.0
	26.4	71.9	62.3	56.9	57.1	54.5	61.5	57.7
	3	8.2	13.6	22.2	4.3	2.2	2.9	57.7
3	4	0	3	11	2	3	2	25
	16.0	0.0	12.0	44.0	8.0	12.0	8.0	100.0
	12.1	0.0	5.0	10.1	9.5	27.3	15.4	9.0
	1.4	0.0	1.1	3.9	0.7	1.1	0.7	9.0
4	2	0	2	2	0	1	0	7
	28.6	0.0	28.6	28.6	0.0	14.3	0.0	100.0
	6.1	0.0	3.3	1.8	0.0	9.1	0.0	2.5
	0.7	0.0	0.7	0.7	0.0	0.4	0.0	2.5
Total	33.0	32.0	60.0	109.0	21.0	11.0	13.0	279.0
	11.8	11.5	21.5	39.1	7.5	3.9	4.7	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	11.8	11.5	21.5	39.1	7.5	3.9	4.7	100.0

Contingency Table Statistics

Column(28) versus Column(40)

Chi Square with 18 degrees of freedom	42.2406
Probability > Chi Square	0.0010
Phi	0.3870
Cramer's V	0.2234
Pearson's Contingency Coefficient	0.3609
Tschuprow's T	0.1879
Lambda A .. Rows dependent	0.0168
Lambda B .. Columns dependent	0.0223
Symmetric Lambda	0.0201
Kendall's tau-B	0.1022
Kendall's tau-B (with correction for ties)	0.1544
Kendall's tau-C	0.1188
Gamma	0.2305
Spearman's rho (rank correlation)	0.1760
Pearson's product moment correlation	0.1730

Contingency Table Statistics

Column(28) versus Column(41)

Chi Square with 18 degrees of freedom	35.9717
Probability > Chi Square	0.0071
Phi	0.3584
Cramer's V	0.2069
Pearson's Contingency Coefficient	0.3374
Tschuprow's T	0.1740
Lambda A .. Rows dependent	0.0165
Lambda B .. Columns dependent	0.0325
Symmetric Lambda	0.0255
Kendall's tau-B	0.0576
Kendall's tau-B (with correction for ties)	0.0897
Kendall's tau-C	0.0670
Gamma	0.1368
Spearman's rho (rank correlation)	0.1018
Pearson's product moment correlation	0.1004

Contingency Table Statistics

Column(28) versus Column(42)

Chi Square with 18 degrees of freedom	23.3262
Probability > Chi Square	0.1784
Phi	0.2891
Cramer's V	0.1669
Pearson's Contingency Coefficient	0.2778
Tschuprow's T	0.1404
Lambda A .. Rows dependent	0.0254
Lambda B .. Columns dependent	0.0000
Symmetric Lambda	0.0104
Kendall's tau-B	0.0543
Kendall's tau-B (with correction for ties)	0.0824
Kendall's tau-C	0.0631
Gamma	0.1249
Spearman's rho (rank correlation)	0.0944
Pearson's product moment correlation	0.0903

4.8	3.3	8.5	27.2	20.6	15.8	19.9	100.0
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
4.8	3.3	8.5	27.2	20.6	15.8	19.9	100.0

Contingency Table Statistics

Column(38) versus Column(39)

Chi Square with 36 degrees of freedom	522.5441
Probability > Chi Square	0.0000
Phi	1.3860
Cramer's V	0.5659
Pearson's Contingency Coefficient	0.8110
Tschuprow's T	0.5659
Lambda A .. Rows dependent	0.4332
Lambda B .. Columns dependent	0.4646
Symmetric Lambda	0.4494
Kendall's tau-B	0.5037
Kendall's tau-B (with correction for ties)	0.6238
Kendall's tau-C	0.5854
Gamma	0.7228
Spearman's rho (rank correlation)	0.6920
Pearson's product moment correlation	0.6954